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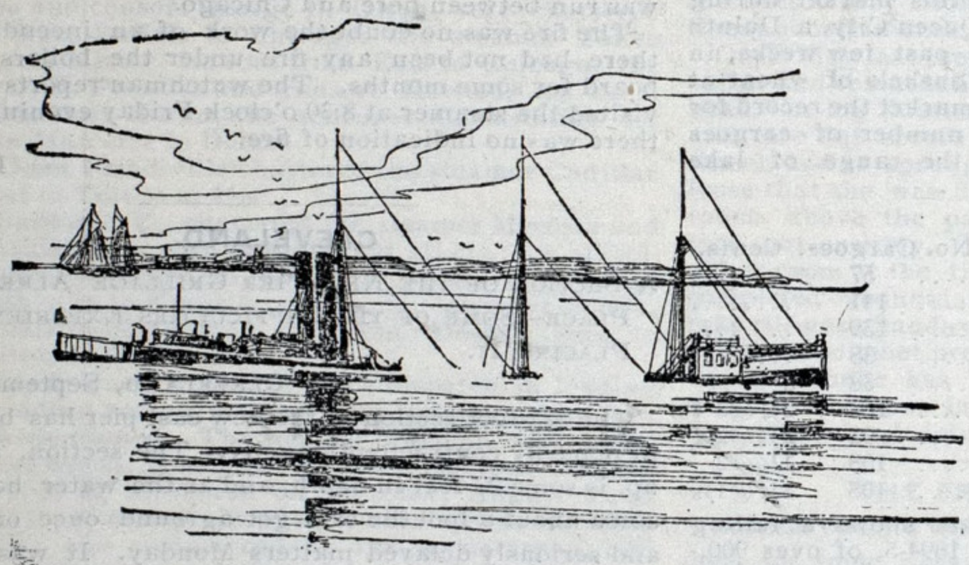
THE OCEANICA RAISED.

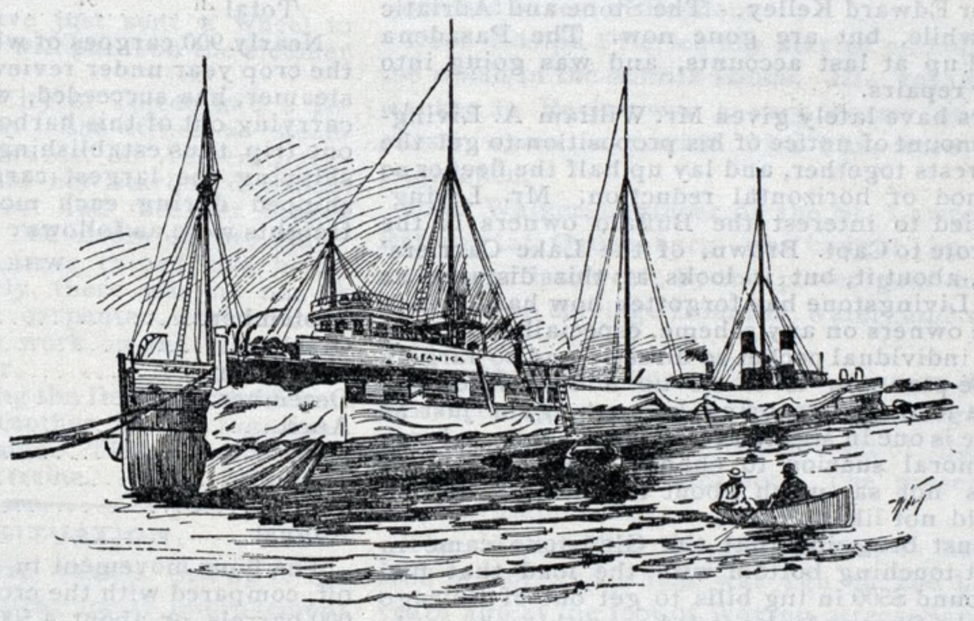
Capt. Harris W. Baker succeeded on Friday last in pumping out sufficiently to float the steamer Oceanica, sunk a few weeks ago by collision with the William Chisholm. He raised her from the channel opposite Windmill Point, and towed her down to the Detroit dry-dock. Capt. Baker completed the job in 11 days, and is entitled to great credit for the expedition which he showed on the job.

The Oceanica, a wooden steamer, 265 feet long, and containing 1,900 tons of furnace coal, lay across the natural channel, with the current against one side; the collision had knocked away her stem. The hood ends sprung wide apart and a gap 8x4 feet was opened, through which the water entered. Capt. Baker began work on Monday, August 24, with six divers and 17 other workmen. Three days were spent in removing the steel sheathing forward, and closing the opening. A temporary stem was put in and the openings in the bows closed. The divers had to do a good deal of work inside the hull to get the necessary shoving in to support the temporary bulkheads. Canvas was stretched over these bulkheads, and then work on the cofferdam was begun. This extended from the stem to the after end of the boat. At the bows it consisted of heavy timbers of Norway pine. Part of the cofferdam was built on top of the rail, and consisted of 2x6 inch timbers, spiked one on top of another. This dam was also jacketed with canvas. Additional stiffness was given to the hull by fastening heavy booms between the three masts. These held additional braces intended to keep the hull from losing its shape, and then the pumping began.

Two sandsuckers were set at work last Friday, and in 2½ hours the steamer was afloat. The sandsuckers remained at work until a steam pump was put aboard and started. This pump controlled the inflow of water without difficulty. Good weather prevailed during the operations. The cargo was not removed. Capt. Baker says she is not in bad shape, and that she has sustained no structural strain that can effect any permanent injury.



THE OCEANICA, AFTER THE COLLISION.



OCEANICA, AFTER PATCH AND COFFERDAM WERE PUT ON.

BAILEY'S HARBOR LIFE-SAVING CREW.

Capt. Peter Olson, keeper of the new life-saving station at Bailey's Harbor, Wis., has organized his crew as follows: No. 1, John Christianson; No. 2, Charles Gaul; No. 3, Volney Brown; No. 4, Alfred Ollander; No. 5, Gustav Egeland; No. 6, Albert Wilson; No. 7, Joseph Arle. The premises about the station are now being put in fine condition by the crew. The slide from the boat-house to the water is 200 feet long. Five members of the crew went to Grand Haven and secured the life-boat, which was in service at the World's Fair. They towed back behind a steamer, and experienced some very rough weather.

NAUTICAL TERMS.

The difficulties of the lexicographer desiring the inclusion of nautical terms in his list are not a little increased by the sailor's love of contractions of his perversities of pronunciation. Let me cite a few examples. The word "treenail" for instance—a wooden spike—in Jack's mouth becomes "trunnel." "To reach" is to sail along close-hauled, but the sailor calls it "ratch." "Gunwale," as everybody knows, is "gunnel," and so spelled by the old marine writers. "Crossjack," a sail that sets upon a yard called the "crosjack yard" on the mizzenmast, is pronounced "crojjeck." The "strap" of a block is always termed "strop;" "streak," a single range of planks running from one end of the ship or boat to the other, is "strake." "To serve"—this is, to wind small stuff, such as spun yarn around a rope—is "to sarve" The numerous contractions, however, are pre-eminently illustrative of the two distinctive qualities of the English sailor, nimblenrss and alertness. Everything must be done quickly at sea. There is no time for sesquipedalianism. If there be a long word, it must be shortened somehow. To spring, to jump, to leap, to tumble, to keep his eyes skinned, to hammer his fingers into fishhooks—these are the things required of Jack. He dances, he sings, he drinks, he is in all senses a lively hearty, but underlying his intellectual and physical caper cutting is deep perception of the seas as a mighty force, a remorseless foe. The matter seems trifling, yet the national character is in it. —Contemporary Review.

NEWLY ENROLLED TONNAGE.

Following is a list of lake vessels to which official numbers and signal letters have been assigned by the Commissioner of Navigation, for the week ending August 29, 1896:

Official No.	Rig.	Name.	TONNAGE. Gross.	Net.	Where Built	Home Port
97,742	St. s.	Maud Moon	13.85	11 23	Buffalo	Buffalo
116,732	St. s.	SirW.Siemens	4,344 43	3,293.08	Cleveland	Duluth
34,259	Bge.	CSCCo.No.11	162.04	162.04	Elizabethport	Cleveland
34,258	Bge.	CSCCo.No.15	168.83	168 83	N. J.	Cleveland

INLAND LLOYDS SUPPLEMENT.

Capt. Dan. McLeod, manager of the Inland Lloyds, has issued the usual supplement to the vessel register, which is dated on the first of each month of the season, and which contains a record of additions and changes for the month just closed. The only new vessel enrolled was the little schooner Wm. Stone, built at Vermillion this year by Crosier, for J. Stone and others, of Delray; she has a net tonnage of 160, a valuation of $5,500, and a rating of A1½. New enrollments for this season include the old schooner Cascade, built at Lorain by G. W. Jones, in 1853, measuring 215 tons, and now rating B2 and valued at $1,200; schooner W. H. Dunham, built in 1873 by D. Robertson at Grand Haven, now owned by D. D. Ludwig, Benton Harbor, rating B1½ and valued at $1,500; and the schooner Col. Ellsworth, built in 1861 at Euclid by Treat, rebuilt in 1872, and lately released after lying stranded in Whitefish Bay, Lake Superior, for nearly a year. She is valued at $2,500, and rates B1 plus. The schooner John S. Parsons, owned by Phelps of Chaumont, after being lengthened and fitted with machinery, is now enrolled among the steamers. Her tonnage is raised from 109 to 122 net, and her value from $5,000 to $7,500, and her rating cut from A1 to A1½. The little schooner Reliable, owned by Davis, of Detroit, who built her in 1880, has also been transformed into a steamer; she now rates B1 plus and has insurance valuation of $3,000. The steamer Jim Sheriffs, which spent the winter ashore in Green Bay, has been re-enrolled, after extensive repairs at Milwaukee, and has been given a valuation of $35,000, and a rating of A1½*. The Egyptian, after being considerably strengthened by the introduction of new timbers forward, has had her rating raised from A2½ to A2, and her valuation from $30,000 to $38,000. The little steamer Pewaukee has had her rating changed from B1½ to B1 plus. The name of the steamer St. Louis, now awaiting a rebuild at Buffalo, has been withdrawn from the register. The tug Birckhead's valuation has been increased from $4,000 to $5,500. The schooner D. S. Austin has been raised from $3,000, B1, to $5,000, A2. The rating of the schooner Sophia J. Luff has been changed from A2½ to A2.

We are just in receipt of first copies of a new Hydrographic Office chart of the St. Mary's River, covering the distance between Shifting Point, at the head of Little Mud Lake, and the Turning Buoy, in Mud Lake proper, with a part of the Winter Point Range. The price of this chart is only 25c, although made from the latest surveys. For sale at MARINE RECORD offices, Fourth Floor, Western Reserve Building.

NEWS AROUND THE LAKES.

BUFFALO.

ORE RECEIPTS RATHER LARGE THIS SEASON—GRAIN STILL ARRIVES IN LARGE QUANTITIES.

Special Correspondence to The Marine Record.

BUFFALO, September 8.

With the grain from Chicago pouring in as it never did before at this time of the year, and with the Duluth rates going up in a way to promise a good fleet from there right along, it will have to be confessed that the expected increase of coal shipments did not materialize, though they have all along been fair. If other ports were affording up freights in the same proportion there would be no cause for complaint.

There is a good prospect of ore receipts for the rest of the season, especially at one or two docks. The Minnesota dock of Pickands, Mather & Co., is doing all it can, and reports enough booked to last far into next month, with prospect of a continuation till the ore freezes up. The Buffalo furnace will take in a considerable amount yet, as the 125,000 tons or so that it needs for the year is not all here yet. This dock does not ship any ore. The other Buffalo ore docks are not so active as these two, and it is feared that the new furnace building at Punxsutawney, up the Buffalo, Rochester & Pittsburg, will not be ready to take any ore this season. The Tonawanda furnace received 21,844 tons of ore last month, and has taken in 77,468 tons by lake this season, which is hardly as much as was expected of it when it was doubled in capacity last spring. Still, it is situated so that it draws considerably from the mines in the Adirondack region.

There is a good showing of lumber receipts at this port and Tonawanda, but hardly enough to keep up the average of former seasons. Buffalo received 148,000,000 feet to September, and Tonawanda 274,700,000 feet. It is certainly remarkable how well the lumber fleet has kept itself in business, considering the general situation.

After all, there have not been any boats laid up here of account; the number has scarcely exceeded half a dozen at any time. There are three liners, the R. A. Packer, Mercur and Grand Traverse, all too small to cut much figure in business, and the Pasadena, Palmer and schooner Edward Kelley. The Stone and Adriatic were here awhile, but are gone now. The Pasadena was steamed up at last accounts, and was going into dry-dock for repairs.

The papers have lately given Mr. William A. Livingstone any amount of notice of his proposition to get the marine interests together, and lay up half the fleet or so by the method of horizontal reduction. Mr. Livingstone has tried to interest the Buffalo owners in the idea, and wrote to Capt. Brown, of the Lake Carriers' Association, about it, but it looks at this distance as though Mr. Livingstone has forgotten how hard it is to combine the owners on any scheme, especially where it touched the individual pocket so directly and so largely as this. The plan now is to tie up a boat when she fails to get a load, and to bring her out again just as soon as there is one in sight, and it would take a large amount of moral suasion to change the plan. Capt. Brown does not say much about the project beyond that he would not like to try it.

We were just bragging that the Gladstone came in here without touching bottom with the load that had cost her a round $500 in tug bills to get out of Chicago with, when the Shenandoah spoiled everything by striking right in the channel at the mouth of the Blackwell canal and broke her wheel, disabling her so that she will have to be towed to Detroit for repairs. She was loaded down to 17 feet, though, and started out with the water a foot down on account of the east wind.

The harbor is slowly getting into shape for the 20-foot channel, the dredgers having already opened a channel on the reef at the lower bend of the creek that fills the bill. The deep-draft vessels have been kept out of this part of the channel for a month or so and if the new channel is cleaned out well it will afford a certain passage right away in a place where vessels were often getting on in low water.

It is a sorry sight to see the dock at the Northern Steamship Company's office full of boiler tubes day after day from the North West. She has given the company a deal of anxiety this season with her steam-making apparatus, but has done no harm beyond delaying herself and the boilers will no doubt be thoroughly rebuilt next winter.

There was never so much attention turned towards the lake passenger business as now. Old line managers are pointing with pride to the large increase of traffic and there is any amount of speculation over possible new routes. It would not be surprising to find a through line opened to Toledo from here before many seasons. With a fast night boat that would carry as much freight as could be handled while the boat was in port, there ought to be money in it.

Charles Hebard, the gamey superintendent of the Minnesota ore dock, is up again after the accident in which his leg was broken. It will be a good while before he can walk on his foot again, but he does not let a mishap like that keep him on his back all summer.

It is pleasant to find Capt. Elnen in so good a job as sailing the schooner Algeria after losing the schooner G. W. Davis last fall. It is a trick of these canal schooners to take their captain along with them when they make their last dive into the deep—as, for instance, Capt. Duff, of the Benson, Capt. Riordan, of the Finney, and Capt. McKay, of the Little Wissahickon; but Capt. Elnen is afloat yet.

One industry that has flourished in spite of everything this season is the carrying of pulp wood from the St. Mary's River to Niagara Falls. For a wonder the underwriters take to it in spite of the fact that it is often taken in vessels that are uninsurable. They say that the practice of stowing it in the hold solid keeps it afloat in spite of the condition of the vessel and if she waterlogs the water does not injure the cargo, so there is no charge unless she goes to pieces.

JOHN CHAMBERLIN.

DULUTH AND SUPERIOR.

GRAIN YEAR ENDED AT THE HEAD OF THE LAKES—THE CROP YEAR SHOWING—LAKE SUPERIOR NEWS.

Special Correspondence to The Marine Record.

DULUTH, September 8.

August 31 closed the crop year, which gives the head of the lakes an unprecedented record in the amount of grain handled at the ports of Duluth and Superior. A comparative statement of receipts and shipments during the crop year follows:

RECEIPTS.

	1895-6	1894-5
Wheat	57,533,171	32,601,517
Corn	234,553	2,931
Oats	4,007,602	1,112,243
Rye	1,188,126	99,556
Barley	4,243,674	2,169,078
Flax	5,462,882	672,760
Total	72,670,008	36,658,085

SHIPMENTS.

	1895-6	1894-5
Wheat	53 183,849	24,350,811
Corn	215,500	2,931
Oats	3,781,344	1,087,295
Rye	1,888,576	70,302
Barley	4,029,494	2,214,028
Flax	4,522,924	667,573
Total	67,621,683	28,392,940

Nearly 900 cargoes of wheat left this market during the crop year under review. The Queen City, a Duluth steamer, has succeeded, within the past few weeks, in carrying out of this harbor 156,000 bushels of wheat at one trip, thus establishing for this market the record for shipping the largest cargo. The number of cargoes shipped during each month and the range of lake freights were as follows:

WHEAT RATE.

	No. Cargoes.	Cents.
September	57	.....
October	141	.....
November	139	.....
December	38	.....
April	38	3
May	163	2¾ @3
June	93	2⅛@2¾
July	108	1½@2
August	108	1¼ @1⅝

The flour movement in this market shows a falling off, compared with the crop year of 1894-5, of over 900,000 barrels, or about 4,500,000 bushels when measured as wheat. The falling off is chiefly in the product of Minneapolis and other interior mills which is shipped through this market. The receipts, from interior mills, were 650,000 barrels less than during the year that preceded it

	1895 6	1894-5
Receipts of flour from interior mills, bbls	3,727,790	4,372,096
Produced by mills at head of lakes	3,403,475	3,324,025
Exported direct from mills	1,308,215	898,120
Total shipments	6,080,692	6,935,519

The production of flour at the head of the lakes did not increase in the same proportion as the grain movement. The chief reason for this is to be found in the disproportionate rates prevailing for the carrying of flour and wheat down the lakes. There is now a discrimination against flour of almost 100 per cent, and though this has been increased by the falling wheat rate since the opening of navigation, the difierential has still been high all season.

COLLINGWOOD.

THE OLD PASSENGER STEAMER BALTIC A TOTAL LOSS FROM FIRE—SOMETHING OF HER HISTORY.

Special Correspondence to The Marine Record.

COLLINGWOOD, September 8.

Saturday morning at 2:45 o'clock the citizens here were aroused by the fire alarm witnessed the destruction by fire of the Baltic, one of the pioneer steamers of the northern lakes. Since the close of the season of 1893 the steamer has not been in commission, and has occupied a berth in the harbor, the greater portion of the time in the Huronland street slip, in which she was lying when burned. The boat is a total loss, against which is insurance of $15,000.

Although there was no wind, the fire burned fiercely for nearly an hour and a half, the dry wood of the cabins and the many coats of paint supplying good material for the element to devour. Although the firemen were promptly on hand, it was evident they could do nothing toward saving the steamer, consequently they directed their efforts to the surrounding valuable property. Some tugs, a schooner, and a number of skiffs which were in the slip were quickly removed to places of safety. The town wharf was partially destroyed, and some cordwood owned by Messrs. Craig & Darling, which was piled on the wharf opposite the steamer was burned.

The burning boat was a grand sight for a time, as the flames leaped from point to point and enveloped the good old ship which had come through hundreds of storms. The Francis Smith. as she was formerly called, was built in the winter of 1866-67 by Melancthon Simpson at his shipyard at Owen Sound, and was launched in June of the latter year. The steamer was built for Capt. H. Smith, to take the place of his river steamer Clifton, which had done service on the route between Collingwood and Owen Sound for a number of years previous. Capt. Smith commanded his new boat until his death in 1872, when she was placed in charge of Capt. Lute Robertson, who has been prominently connected with marine matters ever since. The boat plied on the Collingwood-Owen Sound route until 1874, when she was put into the Lake Superior trade, between these two points and Port Arthur and Duluth. For three years she ran independently on this route, after which she was put into the Lake Superior Transportation Co.'s line, with the side-wheelers Cumberland and Chicora. Of these two the Cumberland was lost many years ago on Lake Superior near Isle Royale and the Chicora is one of the Niagara line running out of Toronto. The Baltic was after operated in company with the steamers City of Owen Sound and City of Winnepeg and later with the steamers City of Owen Sound and Campania. In 1879 the Smith was rebuilt at the Owen Sound dry-dock. In 1888 she was purchased by the Great Northern Transit Co., of this port, and received her second rebuild, this time at the dry-docks here, at a cost of $36,000. In the spring of 1889 she was turned out with new hull, new boilers and elegantly builded cabins and was placed on the Collingwood, Sault Ste Marie and Mackinac route, along with the company's steamers Pacific and Atlantic. It was at this time that her name was changed to Baltic. She plied on this route until 1893, when she was run between here and Chicago.

The fire was no doubt the work of an incendiary, as there had not been any fire under the boilers or on board for some months. The watchman reports having visited the steamer at 8:30 o'clock Friday evening when there was no indication of fire.

D. W.

CLEVELAND.

A SECTION OF THE NEW PIER GRILLAGE ALREADY IN PLACE—SOME OF THE DIFFICULTIES EXPERIENCED IN PLACING IT.

CLEVELAND, September 9.

The 322-foot section of the new east pier has been put in place by contractor Donnelly. The section, as built up, is some 23 feet in depth, and as the water had gone down about a foot the crib got aground once or twice, and seriously delayed matters Monday. It was finally brought into the river again, and early Tuesday morning was set in place and ballasting begun. The timber work will come about to the water level at the normal stage, and will also come about three feet higher along the middle of the pier, leaving a shelf four feet wide. On this will be placed large blocks of Berea stone, 9x4x3 feet, which will make the upper surface level. On this will be put the superstructure of concrete. To protect the stone and concrete from collision damage, fenders will be erected a short distance. These will consist of of three 12x12 inch timbers placed close together. These will be spaced 27 feet between centers, and will be on both sides of the pier, being held against the pier by rods running through both fenders and through the pier, pipes being laid across through the concrete, for the reception of the rods. The L. P. & J. A. Smith Co. had the sub-contract for dredging out the old pier, and the company's tug assisted in placing the grillage. The work of filling in the stone ballast is proceeding rapidy and this will be followed closely by the laying of the stone and concrete, so that a good piece of finished pier will be on exhibition before the weather breaks up. The construction of the outer end of the pier, on which the light stands will also be pushed rapidly to completion.

Capt. Dan McLeod, manager of Inland Lloyds Vessel Register, celebrated his 61st birthday anniversary last Monday. He received a handsome cane from some of his Buffalo friends.

The lighthouse steamer Haze was in port Tuesday. Capt. John Baxter is looking as hearty as ever.

We are sorry to state that Capt. W. S. Mack does not improve, and his family are very much discouraged by his condition. He lies in a comatose state much of the time, and is delirious in the intervals.

CHICAGO.

COMMANDER OF THE FIRST STEAMER ON LAKE SUPERIOR DEAD—DEATH OF HENRY F. LEOPOLD—A "HORSE" ON A CLEVELAND MILL.

Special Correspondence to The Marine Record.

OFFICE OF THE MARINE RECORD,
CHICAGO, September 9.

Capt. D. Power, master and part owner of the schooner Granger, which went ashore near Seul Choix Point, arrived in Chicago last week. He had stripped the schooner and intends to let her lie on the beach until better times. Her hold is full of cedar posts, which are insured. They are being removed by the underwriters.

The whaleback steamer Christopher Columbus gave her last excursion for this season between Chicago and Milwaukee Wednesday, September 9. She has been doing a big business since the beginning of July, having carried many thousands of excursionists, who have to thank the owners of the Columbus for having instituted cheap round trip daily excursions between Chicago and Milwaukee.

The fin-keel sloop yacht Siren went into dry-dock to get ready for the September races, opening with the free-for-all regretta of the Columbia Yacht club Saturday. The Vencedor is now at Marinette, and will in all probabilities be here in time for the event. Whether the Vanenna will be home in time is not certain. All the yachts are coming from their cruise to Lake Erie, the schooner Mistral arriving yesterday.

The match race between the Charlotte E. and Valiant will not be sailed until after the Columbia club event. A strong effort is being made to match the fin-keels for a final struggle before the close of the season, and a race will in all probability come off.

Cap. John Prindiville announces that he is not perparing to sail any of one the of crack yachts in the September races. "I sailed with Mr. Hayes the other day," Capt. Prindiville said. "merely as a guest, and enjoyed the sail very much. When asked my opinion as to certain points, I gave it freely, as I would for any one, but did not for a momement take charge of the Siren to tune her up, nor do I intend to sail her."

Receipts of grain continue heavy and grain freights remain steady on the basis of 1¼c on corn to Buffalo. Carr & Blair chartered the steamer Rockefeller for wheat to Buffalo at 1¼c; barge 137, for corn to Buffalo at 1¼c; George T. Hope, for oats to Buffalo at 1⅛c; and to Black Rock at 1¼c; steamer Progress, oats to Sarnia at 1c

James A. Calbick & Co. chartered the steamer Geo. Burnham for salt from Ludington to Ashland, and for lumber from Superior to Chicago. The steamer W. P. Ketcham and consort George B. Owen were chartered for coal from Buffalo to Chicago; the steamer Toltec and consort Miztec for coal from Erie to Chicago; the steamer J. H. Prentiss and consort Halsted, for corn, Chicago to Port Huron; the schooner Constitution for salt from Manistee to Duluth.

Capt. John Prindiville chartered the steamer Cadillac for wheat to Toledo at 1⅜c

J. J. Rardon & Co. chartered the steamer Mecosta and barge Ashland for corn to Buffalo at 1⅛ cts.; the steamer Arizona for corn to Kingston at 2⅝ cts.; barge Plymouth corn to Kingston at 2½ cts.; schooner Scotia, clipped oats to Black Rock at 1¼ cts.; Hesper, corn to Port Huron at 1⅛.

We very frequently read of quick dispatch in loading and unloading vessels, but we very seldom hear slow dispatch mentioned. The steamer Parnell, with 75,000 bushels of wheat, consigned to the Cleveland Milling Co., arrived at Cleveland on Saturday, August 29, at 8:30 a. m. and her captain was promised quick dispatch. Unloading was commenced at 3 p. m. Saturday, and went on continuously night and day until the following Tuesday noon, when the load was all out, and then she had run 153 bushels short.

The arrivals in Chicago river on the 6th and 7th of this month numbered 73. Three-fourths of the arrivals were steam vessels.

Henry F. Leopold, a resident of Chicago since 1869, and a pioneer in the Lake transportation died of heart disease Thursday afternoon, September 3, at 4 o'clock, at his home 1467 Michigan Ave., aged 76 years. He had been in good health until within a few minutes of his death, which was painless. The deceased and his brothers and brother-in-law, Joseph Austrian, established what is now known as the Lake Michigan & Lake Superior Transportation Co., about thirty years ago. He retired from the company about fiiteen years ago and went into private life. He leave a widow, two sons, and two daughters to mourn his loss.

Albert J. Averill died at three o'clock Sunday morning at his residence, 2018 Michigan avenue, after an illness of three months. He was seventy-three years old and had lived in Chicago nearly fifty years. In 1843 he came to Chicago, and when twenty-one years old was made captain of the steamer Independence, which he took to Lake Superior by transferring the hull on rollers and the machinery by men and teams around St. Mary's Falls. It was always a source of pride to him that he commanded the first steamer on that lake. The deceased gave up sailing and settled in Chicago in 1855. During the first year of his settled life he engaged in the lumber trade, after which he turned his attention to real estate, and was for many years one of the largest and most successful dealers.

WILLIAMS.

DETROIT.

THE GRUMMONDS ESTABLISH A LINE TO CLEVELAND—MAY TAKE IN PELEE ISLAND NEXT YEAR.

Special Correspondence to The Marine Record.

DETROIT, September 9.

Grant Grummond has determined to run the State of Michigan to Cleveland, and may next year add Pelee Island to his list of calling places. Pelee Island is fast coming to the front, and Mr. Grummond believes it could be made a summer resort of no mean proportions. The State of Michigan has been repainted, relettered and otherwise refurnished, and will make a strong bid for patronage between Detroit and Cleveland. George C. Robinson, formerly clerk on the old Ward Line for several years, has just been appointed general freight and passenger agent of the new route. Mr. Robinson is a young man of very pleasing address, and should make a popular man in his position. The boat has been re-officered, being now commanded by Captain John Pearson, with James Barrow as clerk, James Brown as steward, and George Purvis as engineer. Her time-table can be found in the daily papers. The steamer A. D. Hayward has taken the State of Michigan's Lake Huron route for this fall.

The old schooner Fostoria is water-logged at her dock at the upper end of the city, loaded with cedar posts.

The Oceanica is now lying at the foot of McDougal street on the bottom. It is understood that the Lehigh Valley Transportation Co. are much pleased with the result of their contract with Captain Baker. There was some very sharp bidding, and it was only by getting bondsmen that Captain Baker succeeded in obtaining the contract. His work in the past has been very successful as a wrecker, and his latest success will give him better acquaintance among large vessel interests than he has enjoyed heretofore. To-day John C. Shaw was notified that the Lehigh Valley Transportation Co. had filed a libel against the William Chisholm.

The Sir Wm. Fairbairn, the first of the Rockefeller boats to be finished by the Detroit Dry-dock Co., is to be turned over to her owners on Wedesday or Thursday, and will immediately go for a cargo. Her smoke-stack looks very small beside the great, black hull, lying over 400 feet along the wharves. She is now receiving her finishing touches. Her decks have been just painted, and her brasswork etc., is being polished, preparatory to turning her over to her owners. The Robert Fulton, her sister ship, will be launched at Wyandotte Wednesday or Thursday, and will be brought at once to the Dry-Dock Engine Works, where her boilers and engines await her at the hoisting derrick.

The Frontier Iron Works have just sent a wheel to the Detroit Dry-Dock Co., who will put it on the steamer Shenandoah in dock.

On Friday last the steamer City of Toledo had a peculiar and remarkable accident. She struck a "deadhead," or log floating end upwards, off Amherstburg, and tore out several blades of her starboard paddle wheel, and so sprung her wheel and tore her braces loose that she was disabled. The floors of two staterooms above the paddle-box were ruined, one being torn out entirely. Fortunately, there was no one in either room at the time. The carpenter work can be completed Wednesday, but the work on the wheel will take till next Sunday or longer.

Excessive quiet prevails along the Detroit water front. Captain Ruelle has laid up another of his tugs, and now has only one in commission. Thos. Adams says the outlook is gloomy in the extreme.

McC.

THE FREIGHT SITUATION.

Several owners who have had vessels tied up to the dock for some weeks past waiting for an improvement in freight conditions, have given up all hope of doing anything more this season, and a number of both steamers and consorts are being laid up till next spring, regardless of what may turn up later. This does not apply alone to smaller sizes, but a few of the big steel ore carriers are also being stripped, rather than allow their machinery to rust.

The owners are not taking many chances, either; for while a big grain movement is anticipated for this fall, from both Chicago and the head of Lake Superior, the maximum amount of ore yet to come down will not exceed 1,500,000 tons, or about what is usually carried in a single month. Shipments of all other lines are falling off, and with big carriers in operation that can hold almost all the grain raised in some counties, it does no take many cargoes to aggregate a million bushels.

The Chicago corn rate is now 1¼c, and the Duluth wheat rate 1½c on wheat to Buffalo, both being practically the same figure. This is a low rate for even the big carriers, and will have to improve considerably before boats are coaxed out of ordinary.

It was thought that bottom had been touched when the coal rate went to 25c to all ports; but on the few cargoes that are now going to Lake Superior, steamers are loading at 20c and schooners at 15c, the lowest soft coal rate on record.

FLOTSAM AND JETSAM.

Alpena has shipped 55,550,000 feet of lumber, 4,320,000 shingles, and 2,290,000 lath so far this season.

The Superior iron mine, at Hurley, Wis., is on fire, and it will take a month to extinguish the flames.

Marquette ore shipments for last week were 43,925 tons, about half what they were for the previous week.

The owners of the William Chisholm have libeled the Oceanica and the owners of the latter have filed a cross libel.

The new dock at Ashtabula, operated by Pickands, Mather & Co., and just opened, has a capacity for 400,000 tons of ore.

Tug captains report that a number of dangerous logs are floating in and near the straight channel through Maumee Bay.

Mr. Carrs, of Smith's Falls, Can., has purchased the little steamer John Milue, at Collingwood, and will place her on the Rideau canal.

The V. H. Ketchum struck a sunken scow at Ashtabula a few days ago. It is a serious obstruction, and ought to be promptly removed.

The flash-light on the Peninsula at Erie, Pa., is being raised 17½ feet by the addition of brickwork to the top of the tower, making the total height 70 feet.

The lighthouse board has appointed Joseph Schuster assistant keeper of the light station at Round Island, Mich., and Bartholomew Whelan assistant keeper of the station at Fourteen Mile Point.

Two large Pintsch gas buoys ordered by the Dominion government have arrived at Amherstburg. They will be placed and maintained below Point Pelee by the United States light-house tenders.

The Canadian parliamentary select committee on standing orders has reported favorably on the application of the St. Clair & Erie Ship Canal Co., to revive an old act of incorporation and extend the time for completing the work.

Capt. John S. Barber, who has been engaged in the sand trade at Toledo for twenty-five years, most of the time with J. C. & J. H. Davis, died at the home of his daughter, in Roudout, N. Y., last Sunday. His remains were laid to rest at Roudout.

Capt. Adolph Frietsch has started on his trip around the world in the Schlitz Globe. His voyage from Milwaukee to Racine was a very stormy one, and a few guests whom he carried with him were very badly frightened.

John Walker, engineer of the St. Lawrence Marine Railway at Ogdensburg, was caught, on Wednesday evening of last week, by the power gear used in hauling the ship carriage from the water, and was crushed to death.

Fred E. Curtis, purser of the steamer North Land, was recently presented with a handsome gold watch, a set of diamond cuff buttons and a set of diamond studs, by the crew of the steamer. The presentation was made by Capt. Stone.

The old propeller Empire, which was built at Cleveland in 1861, and which was run on the bank several years ago at the foot of Warren street, Sandusky, near the B. & O. docks, has been sold to Weier Bros., junk dealers, who are taking the machinery out of her.

Ashtabula ore receipts to Sept. 1 are as follows: April, 27,583 tons; May, 98,393; June 508,517; July, 416,789; August, 314,927; total 1,666,209 tons, or a gain of 3,075 tons over the same period last year. Ashtabula's coal shipments for August are reported as 131,091 tons.

During August only 7,490,000 feet of lumber was shipped by water from Saginaw River. All season till September 1, the shipments were 47,334,117 feet of lumber, 1,800,000 pieces of lath and 200,000 shingles. These shipments are the smallest since the records of shipments have been kept.

Secretary Carlisle has made the following appointments: Samuel F. Rogers, lightkeeper at Spectacle Reef, vice F. R. Bogan, removed; John Duffy, keeper St. Clair Flats range, vice Rogers, transferred; Andrew G. Bourrissan, keeper at Beaver Island, vice Edward Lasley, deceased.

Capt. Samuel McCumby, of the wrecking tug Wright, which has been working on the Mattie C. Bell, ashore on Summer Island, Green Bay, had one of his arms broken and his head badly bruised by the wheels getting away from him and throwing him out of the pilot house, one day last week. He was taken to the hospital at Escanaba.

THE DRY-DOCK AT KINGSTON, ONT.

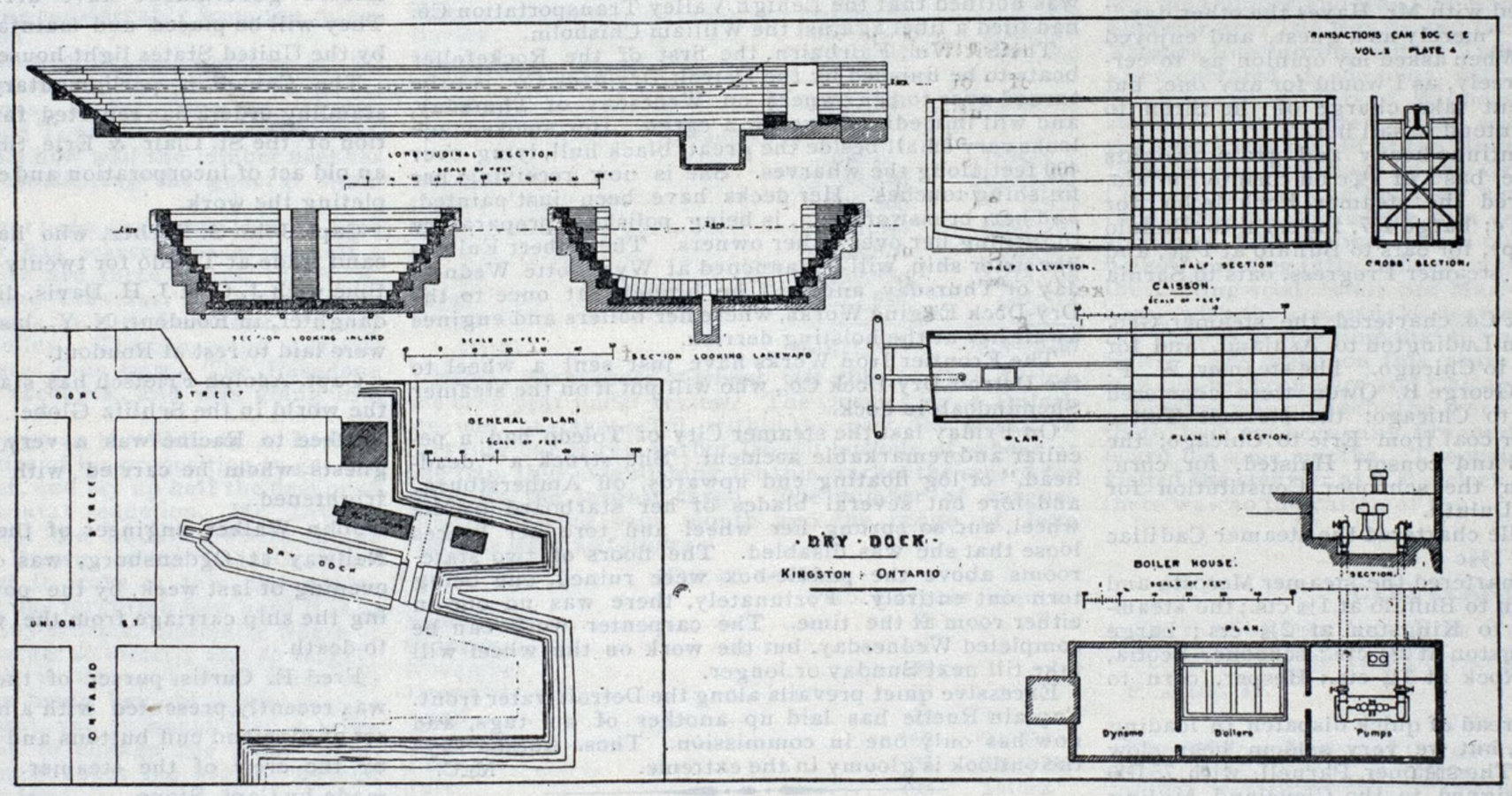
BY HENRY F. PERLEY, M. CAN. SOC. C. E.*

To provide for the repairing of craft on the Great Lakes, the Government of Canada in 1889 commenced construction of a dry-dock at Kingston, Ont., which was brought to completion in 1892, the plans and specifications for which, excepting the details of the pumping plant and engine house, were prepared by the writer. After an examination of several sites had been made, that known as "Power's Ship Yard" fronting on the harbor, was selected, and purchased on reasonable terms. In addition to the property thus acquired, the lower portion of Union street, which had been closed some years previously under an arrangement for the construction of a dry-dock, was ceded by the city to the Crown, which thus became the possessor of a frontage of 400 feet on the harbor, a frontage having deep water at but a little distance from the shore. The site is situated between Gore and Union streets, having the shops of the Kingston Locomotive Works on one side, and those of the Kingston Foundry Company on the other. When taken possession of, the site was encumbered with several buildings, the remains of an abandoned marine railway, an old wharf, and the work that had been executed on a proposed dry-dock and abandoned, all of which had to be removed.

In determining the dimensions of the dock, it was judged that they should exceed by a small amount those of the locks on the Welland canal, so that any vessel which could pass through them could be admitted to the dock, and a length of 280 feet on the floor and 48 feet width of entrance were adopted. During construction, representations were made that the width of the entrance was not sufficient to admit some paddle-wheel steamers plying on Lake Ontario, and it was increased to 55 feet, such change involving the widening of the body of the dock, increasing the size of the caisson and the dimensions of the caisson chamber. After cleaning the bottom in front of the site, an earthern cofferdam was placed, the material (clay) composing it being obtained from the channel of the Cataraqui through the marsh above the highway bridge. This dam failed when the work was about one-third completed, but the break was easily filled and the work resumed.

The dock is built of limestone obtained from quarries at Belleville, and fully up to the requirements of the specification, which demanded that the ashlar in the altars, except in two instances, should be built of stone 2 feet 8 inches in height. As stretchers could not be less than 4 feet in length, with a bed not less in width than 1½ times the rise, the smallest stone that could be used weighed over three tons. The coursing of the side walls was carried through the body of the work, the whole with quarter-inch joints, and dressed with the fine end of a Bouchard hammer. The backing consisted of large and well-shaped stones of such thickness that *two* courses were equal to *one* course of face-work. The floor is of stone, the central 6 feet carrying the keel blocks being raised six inches above the dock bottom. The foundation of the engine house, chimney and machinery were carried up from the rock, and the floors paved with stone. A quantity of concrete was used, composed of 6 parts of broken stone, 1 part clean, sharp sand, and 1 part of Portland cement. The whole of the masonry was laid in a compound of *one* of Portland cement to *two* of sand, mixed and used as required, each course being grouted up and filled full with the compound. All joints were lipped for 4 inches from the face with a compound of 1 of cement to 1 of sand, and neatly pointed and finished off when green. Only Portland cement was used in the work, and a constant testing was carried on during construction. Samples were taken from every *tenth* barrel as delivered, and tested for fineness by the whole sample passing through a 2,500 sieve. Briquettes of neat cement, after remaining for twelve hours in the air and seven clear days in water, gave an average tensile strength of 445 lbs. per square inch. The quoins of the outer face of the inner invert and side walls are of grey granite, all remaining stones in the invert being of limestone. The granite and limestone quoins facing on the caisson berth, and of the walls on either side, are worked with a projection of ¾ inch, and a full width of 12 inches, and set absolutely perpendicular and in a true plane, the faces being finely axed and rubbed down, for on these meeting faces depends the tightness with which the caisson fits, thus preventing leakage when the dock is empty. An extension of the caisson-berth forms a chamber into which the caisson is drawn to admit a vessel. Along each side of the bottom are heavy cast-iron rollers placed at intervals, on which the caisson rests and travels when being moved.

The width of the inner invert is 55 feet and of the outer invert 57 feet, this difference being necessary to permit the caisson being floated into its berth. They are built to a radius of 193 feet, and the stones forming



them are cut with the radial joints. The lowest point in the inverts is 15 feet 6 inches below zero, or the assumed average low water level of the lake, 22 feet below coping level, and 4 feet 6 inches above the floor of the dock. Outside the outer invert is an apron of stone 20 feet in width and 2 feet lower than the center of the invert, in which are placed granite blocks on which the caisson can rest if at any time it is found expedient or necessary to effect repairs in the caisson berth or chamber, or to dock a vessel longer than the floor of the dock, or, in other words, a vessel of 310 feet in length. Under the foundation of the dock bottom are arterial drains, by means of which the leakage from the lake is carried to and discharged by the auxiliary pump, when the dock is empty. Access is had to the dock floor by steps on either side at the entrance end, and on either side of the timber slide at the head. In the floor at the lake end is a rudder well 24 feet long, 3 feet wide, and 12 feet deep, which has proved of much service, as it permits an easy removal and replacing of a rudder. Sixteen cast-iron mooring posts, set in and filled with concrete, are placed around the dock, together with six heavy double-purchase capstans. On the dock floor are cast-iron keel blocks capped with hard wood, placed at intervals of 5 feet and 32 bilge blocks at 10 feet centers, which are operated from the dock coping. The dock is filled through a culvert 4 feet in diameter, the mouth of which is outside the entrance works, and the discharge over the inner invert, the whole being submerged six feet below zero, and controlled by a 4-foot cast iron valve. Provision has been made whereby, in an emergency, filling can take place through the emptying culvert, which is also 4 feet in diameter and controlled by a valve. The caisson chamber and berth is connected by a 12-inch pipe with the auxiliary pump, so that either can be emptied in the event of the stop logs being put in place.

The engine-house, which comprises an engine-room, boiler-room and dynamo-room, is of stone. The chimney—also of stone, and 90 feet in height—is placed partly within and partly without the building. Over the engine and dynamo-rooms the roof trusses are of wood, and over the boilers of iron, the party walls being carried up to the roof as a safeguard in case of fire. The major portion of the floor of the engine-room is 6½ feet below zero, or 13 feet below coping level, and on it is placed the pumping plant, which consists of two vertical 18-inch centrifugal pumps, one right-handed, the other left-handed, having discs 4 feet 8 inches in diameter; each operated by a vertical, high-pressure engine, having cylinders 18 inches in diameter, and a stroke of 18 inches. The pumps are connected directly with the engines, and are in line, and by means of clutches they can be geared together so that one engine can drive both pumps, or an engine can drive the opposite pump. The suction pipes, which are 22 inches in diameter, are furnished with foot valves, and are led through the engine-room floor to the pumps, all joints being absolutely water-tight. The pumps discharge through 22-inch pipes, the centers of which are 9 feet below coping level, or 2 feet 6 inches below zero, and when the lake is at that level, the pumps operate against a head of that height. To prevent inflow when the pumps are not in use and the dock is empty, each discharge pipe is provided with a 22-inch valve.

The auxiliary pump and engines are placed on the upper or higher portion of engine-room floor. This pump, which is an 8-inch horizontal centrifugal, has a maximum lift of 31 feet 6 inches, and discharges 3 feet above zero. It is operated by a pair of vertical high-pressure engines, having 12-inch cylinder and 12-inch stroke, which are also used to move, by means of intermediate gearing, the caisson into and out of place. On the lower floor of the engine-room is a Knowles fire pump, the steam cylinder being 15 inches, and the water cylinder 10 inches in diameter, both having a stroke of 21 inches. This pump can be used in the event of the auxiliary pump being disabled. A delivery pump is carried to the outside of the building, having a proper cap for attaching *four* lines of 2½-inch fire hose. A Knowles patent duplex boiler feed pump, with steam cylinder 6 inches, and water cylinder 4 inches, and stroke 7 inches, is placed in the boiler-room. The boilers—four in number—are of the cylindrical, multi-tubular type, set in brick work, with all the fittings and appliances for their successful working. They are 14 feet long and 5½ feet in diameter, each containing 84 No. 9, W. G., lap-welded, charcoal iron tubes, 3½ inches external diameter, and furnished with domes 3 feet high and 2½ feet diameter. The shells and ends are of three eighths steel, the longitudinal seams being lapped and double riveted, the circumferential seams lapped and single riveted. Before acceptance they were subjected to a cold water test of 180 pounds per square inch, the working pressure being set at 100 pounds. Two of these boilers supply steam enough for the main engines.

*From a paper read before the Canadian Society of Civil Engineers.—Printed in Canadian Engineer.

The smoke flue runs along the front end of the boilers, where connection is made with the uptakes, and is carried to and through the party wall of the dynamo-room, when it is led downward and under the floor to the chimney. A boiler of the drop flue type, 9 feet high and 4 feet in diameter, with 250 1¼-inch by 18-inch flues, with circulating tubes, is placed in a corner of the boiler-room, and supplies steam to the auxiliary engines, which can also take steam from the main boilers. A traveling crane to lift three tons has been placed in the engine-room, and with it any part of the engines or pumps can be handled for repairs.

The dock is closed by a caisson, built of steel, which may be described as an irregular rectangular box with parallel sides and inclined ends, measuring 57 feet in length on the inner face, and 59 feet on the outer; 11 feet 10 inches in width, and 21 feet 6 inches in height. Two keels, 4 by 8 inches dimensions, run the whole length of the bottom, on the outer edges of which are inserted at regular intervals 4 by 4½ inches shear steel bars, properly bent, their places in the keels being truly planed to the required curvature. The keels rest on the rollers in the caisson berth and chamber, and the curved bars, which project somewhat beyond the sides of the keels, are for the purpose of preserving the parallelism of the caisson while being moved. The lower 3 feet is of cellular construction for strength and stiffness, and composed of ½-inch plates and 3x3x⅜ inch angles. All angles for the sides and ends are 3x3x¼ inch, and for the reverse bars 3x3x⅜ inch. The cross-beams up to the lower dock are 4x4x½ inch angles, and above 3½x3½x½ inch. Under the lower and upper floors, Z beams 5x3 1/16x2¾x7/16 inch were used. The upright posts are 6x3x⅜ inch channels, and the diagonal braces 4x3x¼ inch angles. The plates in the bottom and first row on the sides and ends are ½ inch in thickness, and those above diminish to ¼ inch in the top plate, which is finished with a 9x⅜ inch bulb. The floor plates are ½ inch in thickness. All outside plates were planed on their edges, and lapped 2½ inches in the work and were single riveted. Where required, filling pieces were placed between the plates and the frames, to make up for the difference in the thickness of the plates, and voids between the plates and the frames. For the movement of the caisson a hauling bar 13 feet 4 inches in length is connected by means of a 4-inch pin, the outer end projecting 7 feet 9 inches, and carrying a yoke 17 feet 8 inches in length, attached by a 4-inch pin, the outer ends being supported by two hinged brackets coupled with parallel motion bars. For ballasting purposes *two* 6-inch sluice valves are placed in the outer face above the line of the floor, to which are attached 6-inch cast iron pipes leading to within 4½ feet of the bottom. At the bottom of the inside face a 4-inch valve is placed to drain the caisson when the dock is empty; and the caisson can also be emptied by a No. 5 pulsometer. The cellular bottom is filled with concrete, and the further permanent ballast is supplied by the requisite amount of stone. On the outer faces are riveted 6x6x½ inch angles, which carry the white oak meeting faces, which are secured in place by ¾ inch bolts. The caisson weighs 255,000 lbs., and when the lake is at zero its displacement is 358 net tons. It is moved into and out of place by wire ropes, which pass over traversing grooved wheels secured to the masonry at the dock end of the chamber, and over spirally grooved drums keyed on a horizontal shaft at the head, which is actuated by the auxiliary engines.

The dock at zero contains 2,100,000 gallons of water when unoccupied by a vessel, and can then be emptied in 75 minutes, the pumps and engines making 175 revolutions per minute, each pump thus throwing 14,000 gallons per minute. Through the filling culvert the dock can be filled in 55 minutes. A large portion of the dock property as it stands to-day is made ground, the area being enclosed by crib-wharfing of the usual type, and filled with the materials excavated in grading the site, and from the dock pit.

The cost of the dock may be placed as follows;

Land	$ 20,000
Dock proper	365,000
Pumps, engines, etc	26,000
Engine house	26,000
Caisson	18,000
Engineering and contingencies	42,000
Total	$497,000

BOILER MAKERS AND SHIP BUILDERS.

The Brotherhood of Boiler Makers and Iron Ship Builders' held its convention in South Chicago last week. An important part of the work was the institution of a district council to govern work on the Great Lakes. This will include the local unions at Chicago, South Chicago, Cleveland, Detroit, Wyandotte, Bay City, Port Huron, West Superior, Duluth, Buffalo, Erie, Toledo, Milwaukee and Racine. The district council will have charge of regulating and equalizing the wage scales in the various places represented, the hours of labor, etc. The following district officers were chosen as follows: President, H. L. Molach, Wyandotte; first vice-president, M. W. Gibson, Buffalo; second vice-president, W. J. Holden, West Superior; third vice-president, J. Giltoyle, South Chicago; secretary-treasurer, Louis Hall, Cleveland. The district council is affiliated with the International Boiler Makers' Union.

The Diamond Match Co., Ontonagon, Mich., will rebuild their recently burned plant; $150,000 will be expended on new lumber and match manufacturing machines.

SAULT CANAL TRAFFIC FOR AUGUST.

In spite of all that has been said regarding the greatly reduced shipments of many of the principal components of lake freight, all east-bound shipments show increases over last year for the season up to date with the exception of flour, building stone, and lumber, the decrease in all three of these items being very light. In west-bound freight the only decreases shown are in flour, wheat and salt, the shipment of the first two westward last year being increased on account of some cargoes sent up for special purposes. A glance at the table below will show that the amount of freight moved during August was only slightly in excess of that moved during August 1895, the slight increase in east-bound shipments being partially offset by a falling off in those west-bound. For the season up to Sept. 1, however, there is shown an increase of nearly 2,000,000 tons in all classes of freight moved, and an increase of over 6,500 in the number of passengers carried.

Ore shipments for August were 1,209,709 gross tons, as compared with 1,315,725 in August, 1895, a decrease of 106,016 long tons. This is more than balanced, however, by the gains in previous months, and up to Sept. 1, 1896, there had been carried 5,201,875 tons, as compared with 4,896,564 tons for the same period last year, an increase of 305,311 tons. When to this total is added the shipments from Escanaba and Gladstone, the total of ore shipments for the season is found to be between 6,900,000 and 7,000,000 tons. It is very doubtful, however, if there is another million and a half brought down during the closing months of the season, as all the contracts have nearly expired and forces at the mines are being steadily reduced.

The total of down shipments this season is greatly augmented by the immense amount of wheat brought down, 32,732,420 bushels, as compared with 11,655,128 bushels up to Sept. 1, 1895. The large apparent increase in the shipments of "grain other than wheat" is to some extent misleading, as the data for 1895 refers to corn only, shipments of flax, rye, barley, etc., being included in the unclassified freight. The shipments of these grains are, however, phenomenally large, and demonstrate how rapidly the Northwest is developing.

The falling off in lumber shipments is a direct result of the financial stringency, as there have been large quantities at the head of the lakes, all ready to go forward, had it been sold. The falling off is about 50,000,000 feet.

While coal shipments to Lake Superior ports show an increase of over half a million tons as compared with last year, there is nothing to be argued from this, save that dealers have had unusual advantages in shipping during the middle of the season; and it is very possible that the total for the season will fall below the aggregate of last season. Miscellaneous freight shipped westward shows an increase, in spite of the reported lighter purchases.

REPORT OF FREIGHT AND PASSENGER TRAFFIC TO AND FROM LAKE SUPERIOR

FOR THE MONTH OF AUGUST, 1896, INCLUDING STATISTICS OF THE UNITED STATES AND CANADIAN CANALS AT SAULT STE. MARIE, MICHIGAN, AND ONTARIO.

EAST BOUND. ITEMS.	August, 1896. U. S. Canal.	August, 1896. Canadian Canal.	August, 1896. Total.	August, 1895. U. S. Canal.	August, 1895. Canadian Canal.	August, 1895. Total.	Total to September 1, 1896. U. S. Canal.	Total to September 1, 1896. Canadian Canal.	Total to September 1, 1896. Total.	To Sept. 1, 1895.
Copper, net tons	15,066	914	15,980	14,778		14,778	68,135	8,375	76,510	68,770
Grain, other than wheat, bushels	2,159,592	1,149,532	3,309,124	14,000		14,000	9,244,121	3,788,716	13,032,837	16,859
Building stone, net tons	3,578	.....	3,578	1,300		1,300	11,693	1,140	12,833	13,820
Flour, barrels	1,063,306	217,276	1,280,582	1,135,785	Not open	1,135,785	3,348,458	972,906	4,321,364	4,676,592
Iron ore, net tons	1,065.955	288,919	1,354,874	1,473,612	to	1,473,612	3,789,862	2,036,238	5,826,100	5,484,152
Iron, pig, net tons	1,531	2,220	3,751	3,772	naviga-	3,772	9,389	8,035	17,424	15,809
Lumber, M. ft. B. M	98,231	3,145	101,376	138,152	tion.	138,152	428,878	17,145	446,023	495,332
Silver ore, net tons	140	.....	140	.....		.....	140	.....	140	.....
Wheat, bushels	5,060,272	1,734,922	6,795,184	2,695,137		2,695,137	21,465,087	11,267,333	32,732,420	11,655,128
Unclassified freight, net tons	27,137	2,402	29,539	25,745		25,745	99,486	26,310	125,796	99,354
Passengers	4,668	2,062	6,730	5,167		5,167	10,152	5,520	15,672	12,248
WEST BOUND.										
Coal (hard), net tons	33,637	14,950	48,587	52,745		52,745	153,769	71,119	224,888	196,638
Coal (soft), net tons	286,821	138,454	425,275	400,846		400,846	1,119,441	607,630	1,727,701	1,063,476
Flour, barrels	.....	.....	.....	2,000	Not open	2,000	62	.....	62	2,150
Grain, bushels	.....	.....	.....	3,000	to	3,000	1,109	.....	1,109	31,650
Manufactured iron, net tons	10,647	114	10,761	14,585	naviga-	14,585	51,705	3,453	55,158	45,902
Salt, barrels	16,230	1,175	17,405	30,205	tion.	30,205	123,801	6,711	130,512	157,720
Unclassified freight, net tons	36,324	10,506	46,830	41,800		41,800	151,365	42,331	193,696	167,150
Passengers	4,002	3,126	7,128	5,787		5,797	8,638	7,594	16,232	13,119
East bound freight, net tons	.....	.....	1,978,922	.....	.....	1,942,234	.....	.....	8,450,140	7,335,299
West bound freight, net tons	.....	.....	533,913	.....	.....	539,502	.....	.....	2,257,986	1,522,849
Total	.....	.....	2,512,835	.....	.....	2,481,736	.....	.....	10,708,126	8,858,148

NOTE.—United States craft passing in August, 2,103; Canadian craft, 748; total craft, 2,851; United States craft, registered tonnage, 2,082,742; Canadian craft, registered tonnage, 579,761; total registered tonnage, 2,662,503.

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HERE AND THERE.

There is something said, now and then, about the increased cargoes which the larger classes of vessels are able to bring down from Lake Superior since the opening of the new American lock. This is undoubtedly true in individual cases, but the increase has not yet shown itself to any great extent. The average freight cargo for the month just closed is 881⅜ tons for each ship. This is larger, it is true, than the average for July of 798 3-5 tons, but is decidedly less than the average for last year of 910 5-7 tons per ship. The low average is, of course, accounted for by the passenger boats, and still more by the many boats which return to Lake Superior without cargo.

* * *

And now that the Bazin roller ship has been launched, another crank springs up, this time an American, with an idea (!) for increasing the speed of a ship. This man is a resident of Germantown, Pa., a suburb of that great seaport, Philadelphia; and yet he has patented a system for making ships go faster by lifting them out of the water. A principal element in the idea is the putting in of a screw at the bow, to "assist in lifting the bow" from the water, in order that the ship may slide over the waves, instead of plowing through them. This is certainly a radical departure from the ideas heretofore followed out by such eminent naval architects as the designers of the Campania, Lucania, St. Louis, St. Paul, North West, North Land, and used in still larger proportion to the size of the hull in the fast little Philadelphia steam yacht Yankee Doodle, of broadening the hull at the stern in such a manner as to allow as little as possible of the ordinary "squatting" tendency of vessels when going at high speed. This brilliant inventor, whose name is Peabody, needs to learn a good deal about resistance and skin friction, and incidentally something as to the advisability of keeping the propeller down into the water.

* * *

While it is gratifying to notice the unremitting enthusiasm shown by Seaboard, a coast marine paper, in upholding the American merchant marine and measures proposed for its protection and advancement, it is to be regretted that poor judgment and bitterness should allow it to stigmatize as treasonable the more calm and mature thought of its most able contemporary. The Marine Journal, while still heartily in favor of the enactment of the Elkins bill, points out some obstacles to its passage which may be difficult to overcome, and expresses itself in favor of liberal mail subsidies as "the next best thing," in case the Elkins bill should fail of passage. Such a train of thought is certainly judicial, conservative, and broad, and indicates as sincere a regard for the welfare of its clientage as does the frothy abuse of a paper whose continuous bombast has a tendency to become tedious and to thus weaken its very excellent cause. One of the Journal's suggestions in regard to the Elkins bill, however, is that its passage would necessitate the revision of a score or more of the United States treaties. Then let the bill be passed by all means. If there is anything that the country needs badly, it is a revision of a good many of her commercial treaties, under the superintendence of a Secretary of State or a commission to be appointed by him who should be at once aggressive and reciprocal in their policy, and whose aim should be to increase the exports of the United States in all directions, and regulate importations so as to favor American shipping. Foreign nations would not be justified in taking offense at such a movement, and a vigorous foreign policy which shall be closely in touch with the commercial and industrial interests of the country and the protection of its citizens abroad would certainly meet with the heartiest approval of the mass of citizens.

* * *

London Fairplay discusses the question of wages in the United States and Great Britain incidentally in writing of the coming election. "Ship fitters," it says, are paid (in America) 11s 4d to 12s 6d ($2.85 to $3.12½) per day, which is almost 50 per cent more than our usual time rates (in Great Britain). Again, carpenters at 13s. 6d. ($3.37½) per day get double what we pay, and the same applies to smiths. Taking it all around, the wages paid are on an average 70 per cent more than what is paid in this country. I came across a Yankee a few days ago who endeavored to explain that American workmen can do much more work in a given time than any other workmen. If this be true, then the cost of production even with the higher rates paid, will on the total be as cheap as ours. In all such statements as to rates, etc., it is difficult to make comparisons without knowing the details. There is only one thing to be said, and that is, if Americans could produce as cheaply as we can they would get more work to do."

* * *

The closing deduction is very true, but has its saving conditions. American shipyards are just beginning, one may say, to get a foreign reputation which British yards have had for a century. American coast yards are pretty well supplied with work, some of it on foreign orders. The records made by the naval and mercantile products of American shipyards are calling attention to these yards from every civilized country in the world. The discrepancy between American and British prices is being rapidly reduced in consequence of the introduction of improved machinery, and this difference in price that remains goes into the pockets of the American workman, who is, certainly, a hustler when he wants to be.

* * *

It is a matter of sincere regret that Commissioner E. T. Chamberlain, of the Bureau of Navigation, is prevented from visiting the lakes this season. The region needs only to be seen to be appreciated, and it is a pleasure to record that Vice President Stevenson and a party, who have been spending some time at Mackinac Island, have been visiting the Sault. The Vice President is hardly in a position to act directly in lake interests, but "it all helps." Mr. Stevenson was accompanied by his wife and daughter, Judge and Mrs. Wm. M. Springer, Chaplain and Mrs. Springer, of the United States Army, Hon. and Mrs. A. D. Lynch, of Washington, and Miss Whitcomb, of Chicago.

* * *

Some fault has been found on the coast because lake papers have commented upon the immense outlay upon southern harbors, "because it has a tendency to divert the grain trade from the Great Lakes and Erie canal to Galveston." Holy smoke! When the lake grain freight reaches such a figure that there will be a chance for the southern route to offer inducements, there will be a chance for the lake boats to make some money, and we will not see 4,000-ton ships lying idle at the docks for lack of cargoes. If any such comment has been made, it has been merely to emphasize the fact that the returns to commerce upon the perennial expenditures for keeping open the Mississippi and some southern harbors does not begin to repay the expenditure. The Great Lakes have had little reason of late years to complain of government neglect, but the saving for a single season in the amounts paid by the American people for transportation by reason of the improved waterways of the Great Lakes far more than repays the entire expenditures for river and harbor improvement. The Great Lakes no longer ask the government to expend money in the hope of creating a future commerce. They ask that proper care be taken of the channels of an already great and ever increasing trade, in the link of the great east and west route, along the lines of which the nation's commerce must always travel.

* * *

The new Canadian government is charged with being indifferent to the project of establishing a fast steamship line between Montreal and Great Britain, with Halifax as a winter port. The idea, it is true, has not been definitely abandoned, but the government seems very lukewarm on the subject, especially Sir Richard Cartwright, the Minister of Trade and Commerce, who has announced that as neither the Huddart tender nor that of the Allan Line was in accordance with the proposed conditions, and the government is looking further before taking final action. Mr. Cartwright is charged with favoring closer trade relations with the United States. Sir Wilfrid Laurier, the premier, is strongly in favor of improving the waterways to the coast via the St. Lawrence River, and he must favor the steamship idea as well.

* * *

Some of the newspapers which were lately trying to create a sentiment against the new Sault rules have experienced a wonderful change of heart and now say we cannot have too much of them. They propose that Detroit and St. Clair Rivers be placed in charge of government officials, so that navigation may be more secure. This seems hardly necessary, except possibly for a short distance through St. Clair flats, above the canal, the latter being already protected by law. The Sault rules are steadily receiving more friends, and the changes to be made at Washington during the coming winter will probably be only in the line of making restriction and privilege clauses more specified, that there may be less chance for an argument.

* * *

There will be little preparatory work done on contracts for breakwater work this season. The year has so far advanced that everybody concerned would be at a disadvantage, and for all new work provided for under the last river and harbor act the contracts will be deferred until winter, so as to allow of contractors' preliminary work during cold weather, and of begining active operations at the earlist time made possible by the opening of navigation.

* * *

President W. T. Baker, of the Chicago Board of Trade, who returned from Europe recently, is quoted regarding the foreign situation as follows: There will be a good market for our wheat in England. The English crop is fine but there is little of it. The continental crop, except in Russia, is about the same as last year. The Russian crop is small, and she has little or none to export. English stocks are so low that that country must import at once, and she will need more than we can spare."

The New York State Canal Board, which is composed of the elective state officers, has adopted plans and specifications prepared by State Engineer Adams for work in the canal under the $9,000,000 canal improvement appropriation, to the amount of $3,126,301. The work is divided as follows: Eastern division Erie canal, $626,499; middle division Erie canal, $909,017; western division Erie canal, $1,033,557; Champlain canal, $409,502; Oswego canal, $147,726. The board also approved estimates for canal improvement appropriations aggregating $207,000. This work will be advertised at an early date.

The Myke Maru, the first steamer of the new Seattle Oriental Line, arrived at Seattle, August 31. This line operates in connection with the great Northern Rail way and Northern Steamship Line.

SHIP BUILDING AND REPAIRS.

NOTHING BUT TALK.

A local ship building company has been asked for figures on a large sized vessel during the past week, but at present writing it is not thought that anything will come of it. Material has reached its lowest point and is considerably stiffer than a few weeks ago, owing to the action of the steel billet pool in adding $2 per ton to the price of open-hearth over the ordinary Bessemer billets. Beams and channels are held by combination at a price 50 per cent higher than angles, and the channel system of construction is now a little more expensive in the matter of material, although this is of little account, as the chief saving on the channel system is in the money that would ordinarily be spent on riveting.

Thursday, the 10th, is set for the launch at Wyandotte, of the steamer Robert Fulton, built by the Detroit Dry-Dock Co. for the Bessemer Steamship Co. Her sister ship, the Sir William Fairbairn, is probably in commission by this time.

The launch of the revenue cutter W. Q. Gresham, will occur next Saturday afternoon at the Globe shipyard. Mrs. Ruth Hanna will christen the boat.

Rieboldt, Wolter & Co., of Sturgeon Bay, have the new fire-tug for the city of Milwaukee in frame, and work is being pushed as fast as possible. They expect to launch her by October 15.

Mr. Robert Morrill, who is building a tug at Collingwood, Ont., has already sold her to Capt. Arthur Clark and other parties in Parry Sound. The tug which was originally intended to have about an 80 foot keel, has been lengthened to 90 feet. The engines and boilers of the tug Magnettawan, which was wrecked in July, will be put into this hull, which will probably be completed this month.

GENERAL REPAIR WORK.

CLEVELAND.—The steamer Wm. Chisholm is still in the Cleveland dry-dock, and will do well if she gets out before this week.

The Philip Minch got out of the Ship Owners' dry dock Wednesday evening, after getting repairs to the extent of $6,000 to $7,000. The schooner Helvetia had 130 feet of new planking put in, and was well calked. The tug William D. and V. H. Ketchum received new wheels. The Sauber will enter dock next for stern-bearing repairs.

CHICAGO.—The Chicago Shipbuilding Co. have the steamer Norwalk in dock for bottom calking and a new wheel. The steamer Van Raalte is receiving new topsides and general repairs; the steamer City of London, some general repairs and calking. The schooner Emily B. Maxwell will go in dock and receive repairs to damage done by her collision with the schooner Col. Ellsworth, comprising new stancheons, stringers and rail on her bow.

At Miller Bros'. shipyard the steamer P. J. Ralph was in dock for some bottom calking and to have her wheel tightened. The tug Ruby is in receiving repairs to her shoe. The steamer S. K. Martin is in for a survey.

The Independent Tug Line have the fin-keel sloop yacht Siren in their floating dry-dock having her bottom cleaned and painted.

DETROIT.—The steamer Colonial is now a De troi dry-dock, where dimensions for a new fore-and aft compound engine are being taken. The Colonial now has a fore-and-aft low-pressure engine and an old boiler, both of which will be removed and a new boiler placed with the altered engines. The hull will also receive some repairs and a few minor alterations.

The steamer Chas. Eddy has been getting machinery repairs at S. F. Hodge & Co.'s. The Raleigh had a broken cylinder and straps repaired at Hodges'. The schooner Michigan and steamer Buell were in the Detroit dry-dock, the former for calking and the latter for a new wheel. The steamer State of Michigan was in the Springwells dock and had the leak in her stern stopped.

REPAIR NOTES.

The schooner Champion was in the Union dry-dock, Buffalo, for some new keel, forefoot, and some calking.

The schooner Delaware was in dry-dock at Gilmore's yard, Toledo, last week.

The repairs to the Norseman's machinery are nearing completion at Alpena. The work will cost $4,500, and there is no insurance to cover it.

The L. P. & J. A. Smith Co., of Cleveland, have a fine, roomy tug in the rebuilt steamer Riverside, which they have named the Chauncy A. Morgan, in honor of the popular manager of the line. She proves even more roomy than they had expected, and is the very thing for long lake expeditions.

INTERESTING DATA OF THE GREAT LAKES.

About 5,500 cubic miles, or perhaps one-half of all the fresh water in rivers and lakes on the globe, is stored in the Great Lakes. These Great Lakes are dammed up by Niagara to about 600 feet above tide-water. The foregoing facts are furnished by P. Vedel, member of the Western Society of Engineers, and in this table he gives some dimension figures of the various lake bodies of water that will prove of interest:

BODIES OF WATER.	Length, miles.	Av. width, miles.	Max. width, miles.	Water area (including islands), sq. miles,	Average depth, feet.
Lake Superior	390	70	160	31,200	475
St Mary's River	53	2½	5	100	....
St. Mary's River	40	2	4	200	....
Lake Michigan	335	58	85	20,200	335
Green Bay	115	15	21	1,700	95
Mackinac Straits	30	16	23	500	75
North Channel	110	12	18	1,400	70
Lake Huron	250	54	100	17,400	210
Georgian Bay	120	40	58	5,200	170
St Clair River,	35	1	.....	30	....
Lake St. Clair	19	25	29	410	....
Detroit River	27	2	3½	60	....
Lake Erie	250	40	58	10,000	70
Niagara River	34	1	2	60	....
Lake Ontario	180	40	58	7,300	300
St. Lawrence River	760	20	95	.....	.....
Total	.....	.....	.....	95,660	....

The table shows that without including St. Lawrence River, the lake system has a total length of shore line of 5,400 miles, a total water area of 95,700 square miles, a total of land area drained of 174,800 square miles and, therefore, a total watershed of 270,500 square miles.

Mr. Vedel says that Lake Superior is a little larger than Victoria Nyanza, and therefore the largest fresh water lake in the world, even though its size is less than one-fifth of that of the Caspian Sea. The paper goes into great details regarding the shore lines of all the lakes, properties of the waters of the different lakes, climate of the lake region, etc. Several pages are devoted to the question of lake levels.

VISIBLE SUPPLY OF GRAIN.

As compiled for THE MARINE RECORD by George F. Stone, Secretary Chicago Board of Trade, September 5, 1896:

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY. Bushels
Albany	.....	25,000	50,000	.....	.....
Baltimore	1,351,000	1,270,000	192,000	63,000	.....
Boston	925,000	413,000	206,000	.....	.....
Buffalo	1,650,000	91,000	350,000	115,000	279,000
" afloat	.....	.....	.....	.....	.....
Chicago	12,976,000	5,187,000	1,723,000	390,000	39,000
" afloat	.....	.....	.....	.....	.....
Cincinnati	8,000	2,000	15,000	4,000	14,000
Detroit	445,000	16,000	47,000	23,000	.....
" afloat	.....	.....	.....	.....	.....
Duluth and Superior	5,517,000	35,000	349,000	216,000	180,000
" " afloat	.....	.....	.....	.....	.....
Indianapolis	391,000	56,000	.....	.....	.....
Kansas City	658,000	23,000	37,000	5,000	.....
Milwaukee	372,000	1,000	.....	108,000	47,000
" afloat	.....	.....	.....	.....	.....
Minneapolis	11,472,000	11,000	133,000	7,000	1,000
Montreal	284,000	59,000	211,000	6,000	26,000
New York	2,808,000	1,889,000	1,704,000	13,000	97,000
" afloat	114,000	8,000	13,000	75,000	.....
Oswego	30,000	75,000	.....	.....	33,000
Peoria	178,000	66,000	401,000	17,000	3,000
Philadelphia	635,000	414,000	166,000	.....	.....
St. Louis	3,180,000	818,000	84,000	19,000	9,000
" afloat	65,000	50,000	.....	.....	.....
Toledo	713,000	113,000	286,000	64,000	.....
" afloat	.....	.....	.....	.....	.....
Toronto	108,000	.....	65,000	.....	22,000
On Canal	952,000	282,000	695,000	409,000	30,000
On Lakes	1,603,000	2,877,000	536,000	235,000	328,000
On Mississippi	60,000	.....	11,000	.....	.....
Grand Total	46,495,000	13,781,000	7,274,000	1,769,000	1,108,000
Corresponding date 1895	36,754,000	4,782,000	3,194,000	519,000	188,000

No merchant having a marine trade can afford to be without a copy of BEESON'S MARINE DIRECTORY and captains and vessel owners should as soon think of making a voyage without a compass as without one of these books.—Sault Ste. Marie News. For sale at MARINE RECORD Office, $5.

WRECKS AND WRECKING.

The steamer Monteagle, loaded with wheat from Chicago to Prescott, Ont., ran on East Charity Shoal, near Cape Vincent, Lake Ontario, last Friday afternoon. The Donnelly Salvage and Wrecking Co. sent the tug Reginald and steamer Pierpont with a wrecking outfit to her, but they were unable to work on account of the heavy sea, and it was feared she would go to pieces; but Captain Griffith scuttled her to prevent pounding. The gale increased on Sunday, but the steamer held her own, and was released by the Reginald Monday afternoon after 15,000 bushels of wet grain had been pumped from the hold, and 7,000 bushels saved dry. The remainder, 40,000 bushels, was left in the boat. She is in fair shape, but is slightly lumped amidships, where she rested on the reef. She will probably receive only temporary repairs at Kingston. She is owned by Captain M. J. Cummings, of Oswego, is valued at $60,000 and rates at A1½*. She is insured.

The barge Sovereign (Br.), owned by Captain Higgins, of Kingston, capsized in the Bay of Quinte, with a load of brushwood, Monday. The crew escaped in the yawl. She will probably be towed in and lighted.

The schooner Gilbert Knapp, loaded with wood and bark, is stranded on the beach in Good Harbor Bay, and is a total wreck.

The steamer City of Bangor was erroneously reported in the daily papers as aground above the dark hole, in Hay Lake. She was in reality, lying at anchor above the dark hole in Little Mud Lake, waiting for the water to rise at Sailors' Encampment.

Particulars of the wrecking operations on the Oceanica will be found on Page 3.

Capt. Todd, of the Saranac, reports that the schooner Col. Ellsworth is not sunk in the Straits, but stands on her head with her cabin and port side partly out of water, her name being just below the watdr line. She is about five miles east of Waugoshance, and in a very dangerous place. If it had been night the captain thinks he would have hit her.

The wrecking tug A. J. Wright has returned to Sturgeon Bay from her expedition to the schooner Mattie C. Bell, ashore on Summer Island, Green Bay. The Wright has been working there since June, but finally had to abandon her, after stripping her of everything. Four pumps could not keep her free after a diver had done all the patching that was possible.

The E. H. Jenks, with Mr. Carl D. Myers complete diving apparatus, left Alpena last Friday morning to try to locate the Norman. No report has yet been received.

A large piece of copper ore has been shown in Alpena, and the claim is made that it was picked up by the steamer H. A. Root, which has been searching for the Penabie. Mr. Smith, of Milwaukee, who is in charge of this expedition, returned to Milwaukee a few days ago, and is believed to have important information as to the location of the wrecked boat.

The schooner Emeline, which capsized off Bailey's Harbor a few weeks ago, now lies in 20 feet of water near that port. Brown Bros., of Bailey's Harbor, bought the wreck for $15.

BIDS FOR DREDGING IN MAUMEE BAY.

Following is an abstract of bids for dredging in the straight channel through Maumee Bay, opened at the office of Col. Jared A. Smith, Corps of Engineers, U. S. A., at Cleveland, Wednesday, September 2, 1896. The amount available for dredging does not exceed $80,000: Michael Sullivan, Detroit, $0.098; Wm. J. Daley, Ogdensburg, $0.10; G. H. Breyman & Bros., Toledo, $0.09; The L. P. & J. A. Smith Co., Cleveland, $0.14; W. A. McGillis & Co., Cleveland, $0.11⅜; R. J. Cram, Detroit, $0.18; John Stang, Lorain, $0.16; Carkin, Stickney & Cram, Detroit, $0.14¾; James Rooney, Toledo, $0.10. It was reccommended that the contract be awarded to G. H. Breyman & Bros., who were the lowest bidders.

The Hydrographic Office has just issued a large, accurate and handsome chart of Cleveland's inner and outer harbor, and the adjacent portion of Lake Erie, containing the results of the very thorough survey made last season by the U. S. S. Michigan. The soundings are given up the Cuyahoga River as far as Jefferson street bridge, and up the old river bed to its head. The chart measures about 30 x 40 inches. Price $1.25, at MARINE RECORD offices, Fourth Floor, Western Reserve Bldg.

REPORT OF THE LIFE-SAVING SERVICE.

Gen. Supt. Sumner I. Kimball, of the United States life-saving service, has just issued his annual report in book form. A synopsis of the report was printed in THE RECORD some weeks ago, but the volume contains much of interest to the lake region which will not admit of condensation.

The following table is a summary of the work on the Great Lakes for the year ending June 30, 1895, as compared with the work of the whole service:

NATURE OF CASUALTY.	Number of vessels.	Tonnage of vessels totally lost.	Tonnage of vessels damaged.	No. of laden vessels.	Wrecks involving total loss	Casualties involving partial and unknown damage.	Number of passengers.	Number in crews.	Number of lives lost.
Founderings	11	4,535	204	11	9	2	3	88	49
Strandings	107	3,667	101,205	84	14	93	79	1,267	1
Collisions	62	7,295	50,320	37	7	55	441	757	14
Other Causes	76	4,537	45,300	49	10	66	277	860	12
Total	256	20,034	197,029	181	40	216	800	2,972	76

Referring to the above figures, the report says: "It must not be understood that the entire amount represented by the figures (stating the total value of property saved) was saved by the service. A considerable portion was saved by salvage companies, wrecking tugs, and other instrumentalities often working in connection with the surfmen. It is manifestly impossible to apportion the results accomplished. It is equally impossible to give even an approximate estimate of the number of lives saved by the station crews. It would be preposterous to assume that all those on board vessels suffering disaster who escape would have been lost but for the aid of the life-savers; yet the number of persons taken ashore by the life-boats and other appliances by no means indicates the sum total saved by the service. In many instances where vessels are released from stranding or other perilous predicaments by the life-saving crews both the vessels and those on board are saved, although the people are not actually taken ashore; and frequently vessels and crews escaping disaster entirely are undoubtedly saved by the warning signals of the patrolmen; while in numerous cases, either where vessels suffer actual disaster or where they are only warned from danger, no loss of life would have ensued had aid been rendered.

In addition to those saved from vessels, 114 persons (this includes the whole service of the United States) were rescued by the surfmen under circumstances of such peril that in most instances life would undoubtedly have been lost but for the opportune assistance afforded. Twenty-four of these had fallen from piers, wharves, etc.; 14 were bathers whose strength had been exhausted; 3 were intoxicated men in danger of perishing from exposure on the beach at night; 48 were imperiled in four instances on waterworks cribs and distant breakwaters where there was a heavy sea; 9 were adrift on ice floes in Lake Michigan; 11 were cut off from shore by the rising tide while fishing from outlying rocks; three fell into the water from a dismembered raft; and one was an aeronaut who had fallen from his balloon into Lake Ontario.

The number of disasters within the scope of the service exceeded that of any past year by 790. This large excess is due in some measure to the extension of the service by the establishment of new stations, but chiefly to the conditions of weather which prevailed during the year. The proportion of loss, however, is smaller than in any previous year since the general extension of the service upon the sea and lake coasts, except, as to life, the year 1888, and as to property, 1884. The average annual loss of life from 1877 to 1895 inclusive, has been one out of every 107 persons on board vessels involved in disasters, and the average loss of property 22 per cent. of the amount involved.

The following table shows a summary of disasters which have occurred within the scope of the life-saving operations from November 1, 1871, to June 30, 1895. It should be observed that the extent of the service during the period named was as follows: 1871–72, coasts of Long Island and New Jersey; 1872–74, coasts of Cape Cod, Long Island and New Jersey; 1874–5, New England, Long Island and New Jersey coasts, and from Cape Henry to Cape Hatteras; 1875-6, all the above, and from Cape Henlopen to Cape Charles; 1876–77, and since, all the foregoing, with the addition of the eastern coast of Florida and portions of the lake coasts, and, since 1880, the coasts of Texas:

Total number disasters	8,302
" value of vessels	$92,956,220
" " " cargoes	$40,685,754
" " property involved	$133,641,974
" " " saved	$102,342,047
" " " lost	$31,299,927
" number persons involved	67,329
" " lives lost	750
" " persons succored	*12,013
" " days succor afforded	31,353

Eighty-five of those lost perished in the disaster to the steamer Metropolis in 1877–8, when service was impeded by distance, and 14 others in the same year from similar causes.

The report contains a series of thirteen valuable tables relating to casualties on the Great Lakes, of which the following is a summary:

	Ninth District.	Tenth District.	Eleventh District.	Total for the Lakes.	Total for the United States.
Number of disasters	75	50	107	232	675
Value of vessels	$566,635	$908,900	$1,932,440	$3,407,975	$8,075,075
Value of cargoes	$ 60 690	$455,385	$218,380	$734,455	$2,650,100
Persons on board	582	744	1,163	2,489	5,823
No. of persons lost	3	0	7	10	26
No. days succor at stations	99	127	65	291	2,232
Value prop'rty saved	$522,605	$1,112,920	$1,980,995	$3 616,520	$9,220,265
Value property lost	$104,720	$251,365	$169,825	$525,410	$1,504,910
Total losses vessels	3	3	5	11	73

The report notes the placing in commission of the Duluth station, and the conversion of the old station at the mouth of Chicago River, which was used as an adjunct to the Jackson Park station, into a fully equipped station. In regard to compensation the report says:

"The act approved July 22, 1892, increasing the compensation of surfmen from $50 to $65 per month relieved the service of the difficulty it had for a considerable period experienced in enlisting and retaining competent men for the crews. Although the rate then fixed was smaller than many thought should have been accorded, it sufficed to secure the requisite ability and to restore contentment in the stations."

*Included rescue of persons not on board vessels.

TACOMA'S OCEAN COMMERCE.

Harbormaster Hoflin makes the following report of the ocean commerce of the port of Tacoma for the month of August, 1896:

IMPORTS.

Cargoes of steamers Victoria and Annandale from China and Japan, value	$ 408,855.78
Previously reported	2,113,743.86
Total imports eight months	$2,522,599.74

EXPORTS.	VALUE.
20,275 barrels flour (China and Japan)	$ 61,885.50
5,000 bales cotton drills (Shanghai)	162,740.00
865 cases condensed milk (Japan)	32,000.00
2,247,053 feet lumber (China and Australia)	22,810 00
2,379,000 feet lumber (coastwise)	20,086.00
32,576 tons coal (San Francisco)	97,728.00
Miscellaneous merchandise to China and Japan	18,100.00
Miscellaneous merchandise to British Columbia	25,398.43
Total	$ 413,067.93
Previously reported	3,838,328.04
Total exports eight months	$4,251,395.97
Same period last year	2,957,930.03
Gain over last year	$1,293,465.94

Inward registered tonnage, 53,682; outward registered tonnage, 49,374; inward cargo tonnage, 10,505; outward cargo tonnage, 43,752; arrivals, 42; departures, 38.

CLEVELAND, January 27, 1896.

H. G. TROUT, Buffalo:—We have used a number of your wheels on different boats belonging to us, and have always found them to give good satisfaction. We find that in several cases they have increased the speed of the boat and have also reduced the consumption of fuel.

J. C. GILCHRIST.

Beeson's Marine Directory is doubtless as complete and reliable as any a government commission could prepare.—Milwaukee Sentinel. For sale at MARINE RECORD office, $5.

STANDING BY THE NEW RULES.

A full meeting of vessel owners, managers, and underwriters was held at Buffalo last Friday, and took action upholding the rules for the navigation of the St. Mary's River, prepared by direction of the Lake Carriers' Association. Capt. J. H. H. Brown, president of the association, was instructed to issue the following letter, as expressing the sentiment of the Buffalo contingent. As Buffalo is the headquarters of the line boats, this expression, coming from the source it does, is of especial value:

"The criticism of the so-called Sault River rules would seem to indicate that those rules have not been effective in securing protection in the navigation of the Sault River. An examination will demonstrate, however, that the rules have so far proven satisfactory and effective in preventing collisions, because there has been a total absence of not only serious, but minor collisions in the Sault River this season, as against the large number of collisions last season, and in previous years. Masters who appreciate care are loud in their praises of the effectiveness of the new rules, and have no word of fault to find with them. It is to be regretted that an effort should be made to do away with the rules, or to so modify them as to destroy their usefulness.

"It seems as if the criticisms took a personal turn, and the responsibility for the rules seem to be attributed to Capt. W. S. Mack, of Cleveland. Capt. Mack was merely an instrument in the hands of the Lake Carriers and others, and formulated the rules in connection with others of a committee named for that purpose and the work was well done. These rules had the indorsement not only of the Lake Carriers, but also of the lake underwriters, who, from bitter experience, appreciated the necessity for greater care in the navigation of the Sault River.

"It is to be regretted that owners of vessels and masters cannot appreciate the fact that it is better to submit to a trifling delay in navigating narrow and dangerous channels than to incur the possibility of not only loss of life and property, but of the infinitely greater delay in dry-dock, undergoing repairs in consequence of disaster incurred in navigating such channels under speed, which also involved more or less recklessness.

"There is no question but that so long as human nature is what it is, all masters will not consider their duty in the same light. Whereas some would, under any circumstances, whether there were rules or not, exercise the greatest care and caution, others of a more reckless turn, but perhaps quite as skillful, would take greater chances, involving in many cases serious disaster. It is wise therefore that a check should be put upon all, and it seems incomprehensible that owners of vessels or masters should not recognize the necessity of the regulation such as those now in force in the Sault River.

"It is possible that experience may demonstrate that the rules may be modified in some respects, but this will not justify an agitation for a hasty abrogation of the rules which, under the careful administration of Capt. Davis, have proven to be a great boon to vessel owners and all interested in the lake marine.

"It is to be hoped that newspapers generally will take pains to inform themselves as to the correct situation when, no doubt, they will be as loud in praising the rules as some of them are now adversely criticising them."

THE LIBRARY TABLE.

The New Orleans Picayune, in its issue of Sept. 1, devotes considerable space in an enlarged edition to a review of the history and a showing of the rapid growth of the port of New Orleans.

Mr. Lloyd Brice having sold the North American Review and retired from all connection with it, the September number is issued by the North American Review Publishing Co. Sir Alfred Moloney, governor of British Honduras, in the September issue describes the financial condition of the colony under the silver standard and the results of the change to good money. In a thoughtful contribution, Mr. John W. Stahl, secretary of the Farmers' National Congress, shows conclusively that the agricultural population has always voted for sound money when the issue arose, and holds out arguments to show that they will do so again this fall. He points out the significant fact that only in a few isolated cases has the Populist vote made any showing outside the larger cities. Dr. Cyrus Hamlin addresses a convincing open letter to Senator John Sherman in reply to a cold-blooded statement of that worthy that American missionaries in Turkey were not entitled to the protection of the United States Government, in which his statements seem to call into question the great friendship of Russia for the United States. Another very important contribution is "The Duty of the Hour," a presentation of the wants of the two sides of the fall campaign, by Hon. Warner Miller and Hon. Richard P. Bland.

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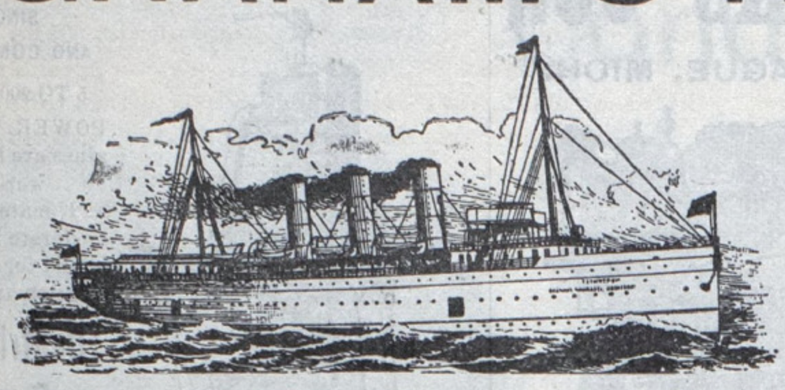

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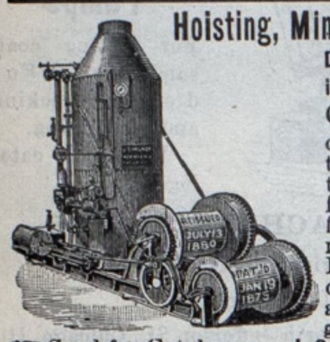

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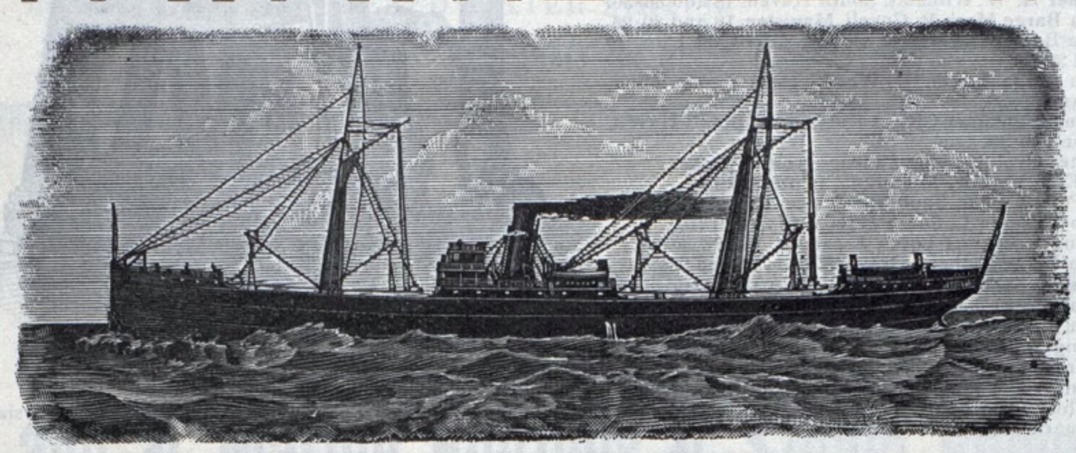

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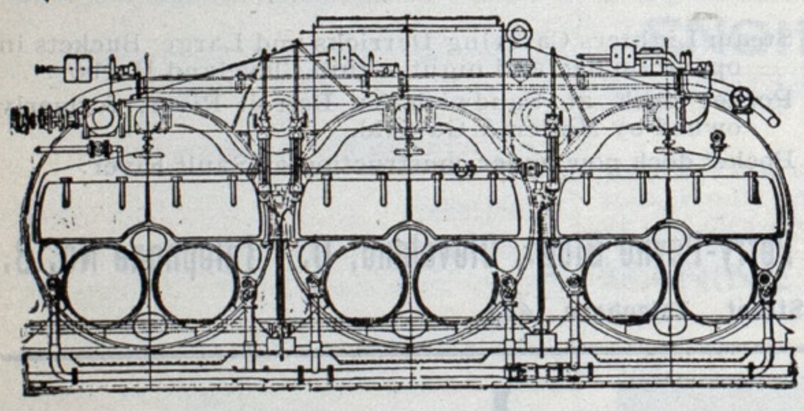

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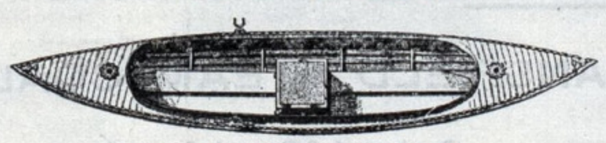

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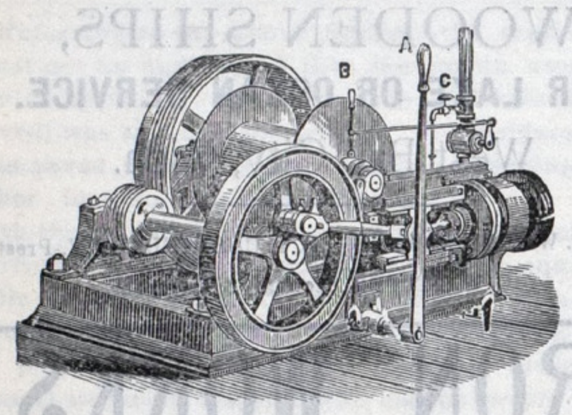

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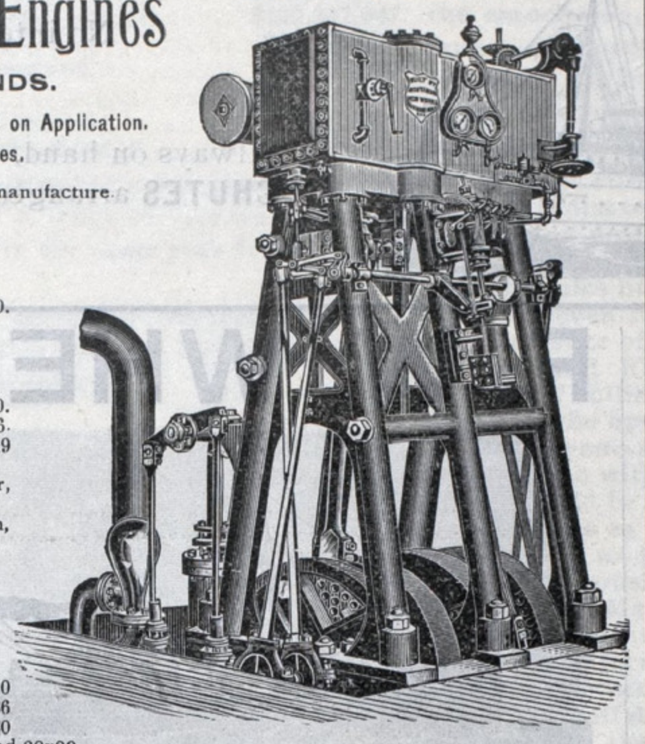

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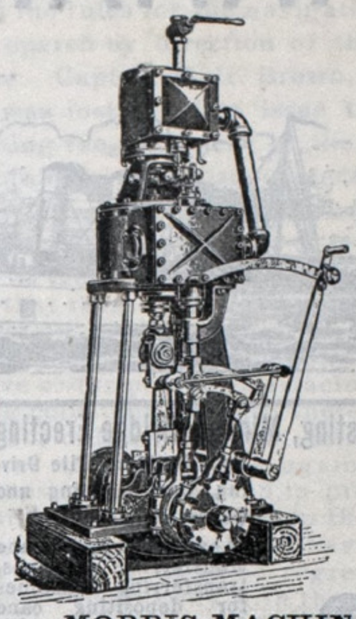

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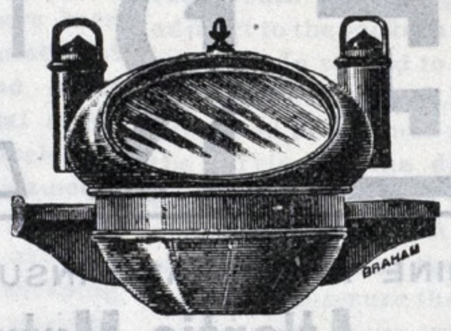

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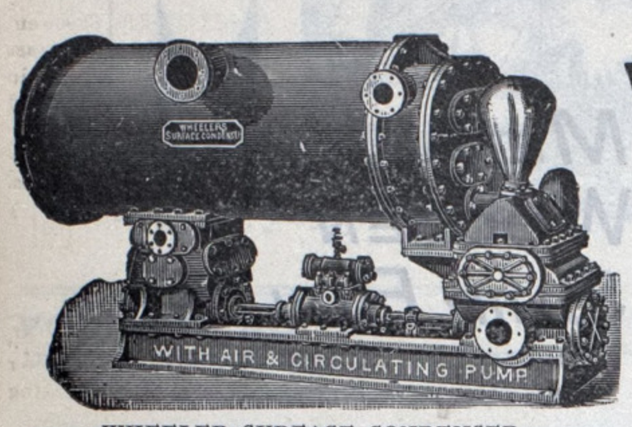

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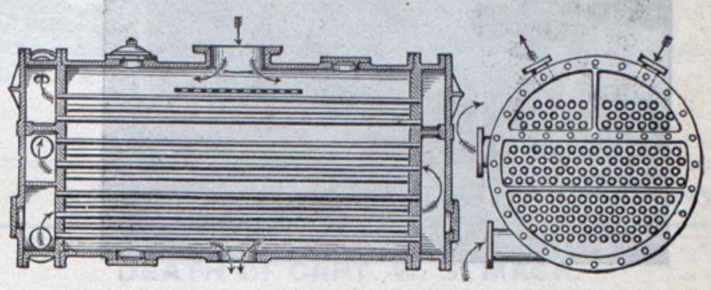

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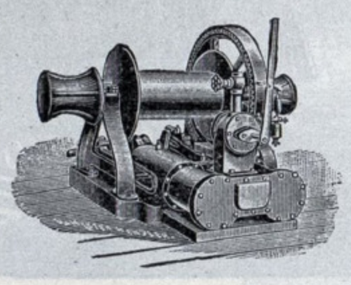

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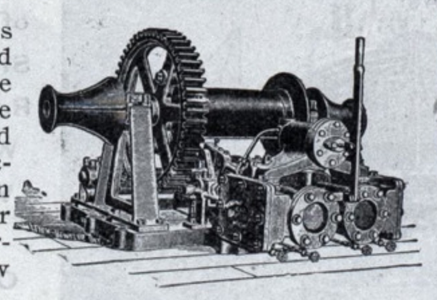

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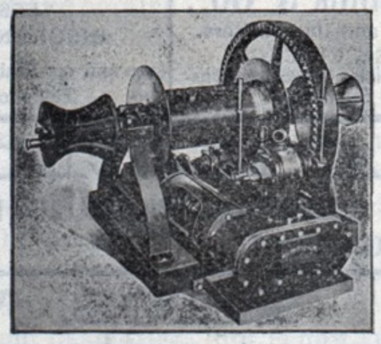

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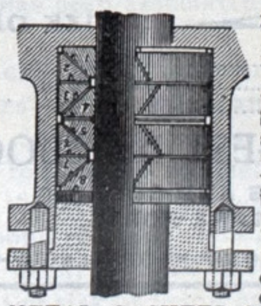

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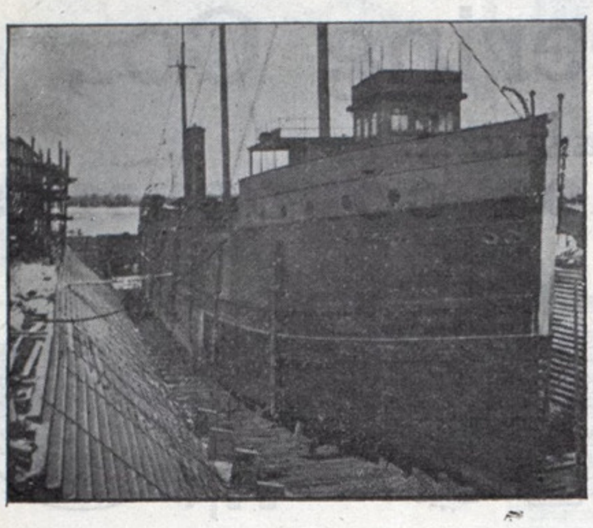

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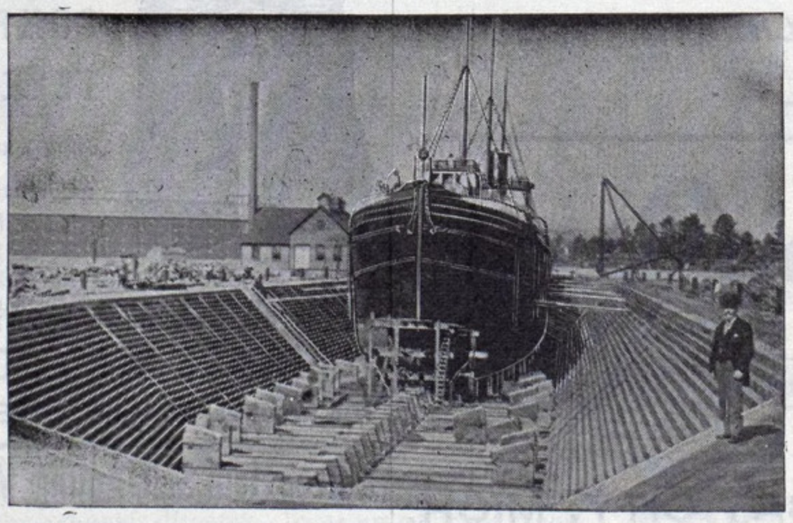

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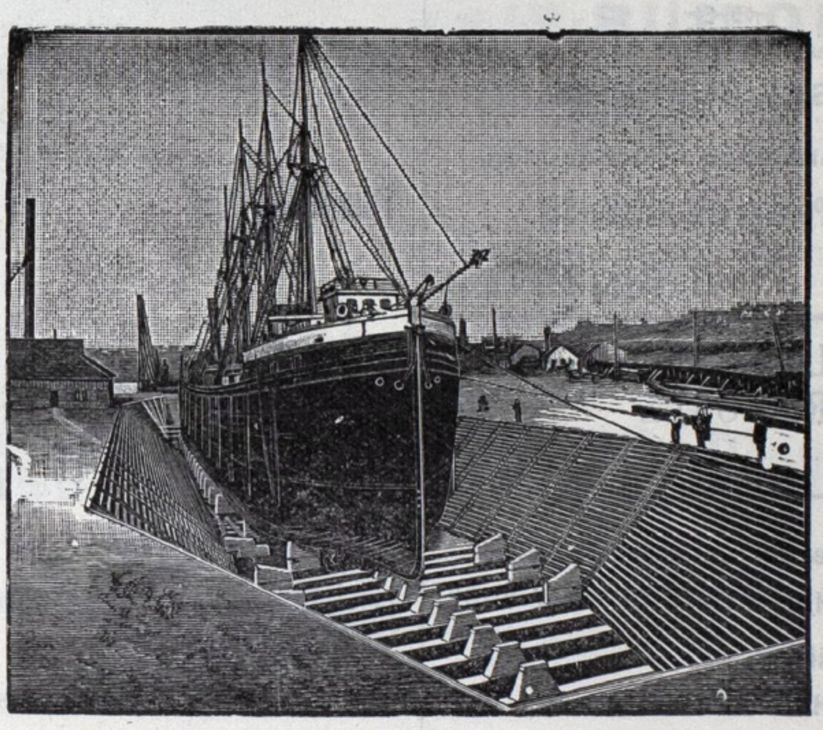

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